Vol. VII

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1943

No. 409

TENNESSEE COAL, IRON & RAILROAD COMPANY, SLOSS-SHEFFIELD STEEL & IRON COMPANY AND REPUBLIC STEEL CORPORATION, PETITIONERS,

vs.

MUSCODA LOCAL No. 123, ETC., ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH CIRCUIT

PETITION FOR CERTIORARI FILED OCTOBER 4, 1943.

CERTIORARI GRANTED NOVEMBER 15, 1943.

VOLUME VII.

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TRANSCRIPT OF RECORD

UNITED STATES

CIRCUIT COURT OF APPEALS

FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY,
Appellant,

versus

MUSCODA LOCAL No. 123, ETC., ET AL.,
Appellees.

SLOSS-SHEFFIELD STEEL & IRON COMPANY,
Appellant,

versus

SLOSS RED ORE LOCAL No. 109, ETC., ET AL.,
Appellees.

REPUBLIC STEEL CORPORATION,
Appellant,

versus

RAIMUND LOCAL No. 121, ETC., ET AL.,
Appellees.

Appeals from the District Court of the United States for the Northern District of Alabama

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(ORIGINAL RECORD RECEIVED APR 4 42)

4394 T. C. I. EXHIBIT No. 30-A.

Tennessee Coal, Iron & Railroad Company,
Iron Mines and Quarries,
Ishkooda Division.

Minutes of Meeting Held at Ishkooda Office at 9:00 A. M., Friday, November 11th, 1938.

The following were present:

Mr. C. B. Cameron, Superintendent, Ishkooda Division, and the following committee from Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman,
Elmore Mitchell, Col., Committeeman,
Dennis Hart, Col., Committeeman.

The meeting was called to order by Mr. C. B. Cameron, Superintendent at 9:00 A. M.

Mr. Cameron:
The meeting is now open. Is this your regular committee?

Mr. Patterson:
This is the Committee as appointed by the Organization.

Mr. Cameron:
What do you wish to bring up before me today?

Mr. Patterson:
Well, first we would like to have an understanding about our meetings with you in the future.

Mr. Cameron:
What procedure would you like to follow?

Mr. Patterson:
Any procedure that suits you.

Mr. Cameron:
Do you wish to have a set date for a regular meeting or just have it arranged for a call meeting when needed?

Mr. Patterson:
Suppose we follow the same procedure that we have in the past, that is, not have any set date for the meeting but a meeting can be called by you or by the Chairman of the committee.

Mr. Cameron:
That is all right with me.

Mr. Patterson:
We will furnish you with a typewritten list of this committee and would like to have it posted on the Bulletin Board.

Mr. Cameron:
All right.

Mr. Patterson:
The only thing we have today is the case of Mr. Pete Dulaney. As you know we had his case up with Mr. E. M. Ball and Mr. J. F. Vance and they referred us back. Dulaney thinks he should have a Head Miner's job.

Mr. Cameron:

It is a function of the Management to appoint all Head Miners and we don't feel that Dulaney is able to do the work of a Head Miner. If you will recall Mr. E. M. Ball stated—quote, "I do not think that Dulaney's physical condition at this time is such that he could handle the work of a Head Miner. We placed him on a job that we thought he could handle."

Mr. Patterson:

We feel that he has not been given a fair chance.

Mr. Cameron:

He was placed on a job that we thought he could do but he is not showing the proper co-operation in that heading that he should.

Mr. Patterson:

In what manner do you mean?

Mr. Cameron:

He was off from work two shifts without notifying his Mine Foreman.

Mr. Patterson:

Did Dulaney give any reason for being off, when he came back?

Mr. Cameron:

When he came back he told Mr. C. E. Brown, Mine Foreman, that the first day he had over-slept himself and the second shift he was sick. He said that he did not know that he was supposed to notify the Mine Foreman when he was off but that he would do so in the future.

Mr. Patterson:

Well, I will just wait and see Mr. Dulaney about this case and if there is anything further to take up we will follow the regular procedure.

Mr. Cameron:

Dulaney is not co-operating with his Head Miner in the heading and that place is not making the bonus that it has made. It made an average of a little over 9% bonus for three estimates prior to the shut down in June and it should be making it again. Dulaney wanted to quit work on one shift at 2:40 o'clock and the Head Miner told him that 3:15 was quitting time. This is not co-operation.

Mr. Patterson:

We are not upholding that and will not bring the case of a man in here that would do anything like that.

Mr. McBrayer:

Mr. Cameron, how are the other places holding up their production relative to before the shut-down?

Mr. Cameron:

They are not all coming up to expectations.

Mr. McBrayer:

Relative to Dulaney's case, do you hold the reason for not making bonus in his place against him and don't hold it against the men in the other headings where they are not making what they should?

Mr. Cameron:

We are talking about a specific case and I do when a man wants to quit work at 2:40 o'clock instead of 3:15 which is quitting time. That is not co-operation and bonus can not be made.

This does not mean that Dulaney will not have a chance for promotion. When I find that his work warrants a promotion, his health is such that he can do the work and there is an opening Dulaney will be considered.

Mr. Patterson:
That is all we have.

Mr. Cameron:
The next meeting will be held either at your request or mine.

Mr. Patterson:
We would like to have three copies of the minutes of the meetings.

Mr. Cameron:
All right, you may have them.

The meeting adjourned at 9:48 A. M.

E. T. PATTERSON,
Committeeman.

C. B. CAMERON,
Superintendent—Ishkooda,

J. I. WILLIAMS,
Secretary.

4397 T. C. I. EXHIBIT No. 30-B.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.
Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office, January 11, 1939.

These present were:

Mr. C. B. Cameron, Superintendent,
Mr. J. I. Williams, Supt's Clerk,

and the following Committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman.

The meeting was called to order at 9:00 A. M., by Mr. C. B. Cameron, Superintendent.

Mr. Cameron:

This is the regular monthly meeting and the meeting is now open. I would like to state that the meetings in the future will be held at 9:00 A. M., on the first idle shift in the second week of each month.

Mr. Patterson:

That is all right with the Committee.

Mr. Cameron:

Do you have anything to bring up for discussion today?

Mr. Patterson:

Yes, sir, the first thing is a complaint against George Holloway, Colored, Bath House Attendant, at No. 11 bath house. He comes into the white section of the bath house about 6:10 or 6:20 o'clock and starts sweeping before the men get away from the bath house. I have asked him three times to quit doing that as the dust is too bad for the men.

Mr. Cameron:

You should have taken this up with the Foreman instead of telling Holloway. I have already taken that matter up and I supposed that it had been corrected but if it has not been I will see that it will be.

Mr. Patterson:

We want to bring up the case of Lon Randle, Colored. He has asked the Committee to see if he can not be allowed to go back in the mine to work. I had him to go to see the Doctor and the Doctor told him that his eye was as well as it would ever be and we think that he should be allowed to go back into the mine to work. There are other men in the mine with one eye.

Mr. Cameron:

I don't agree with you. There are several men in the mine who only have one eye but they have been working in the mine for a long time. I don't think that we should allow Randle to go back into the mine at this time. Just because we have other men in the mine that have one eye is no reason for putting someone else in there. Randle has only been injured since March, 1938, about a year, and he is not accustomed to the loss of his eye yet.

Mr. Patterson:

Since others are in the mine with only one eye Randall feels that he could work all right in the mine.

Mr. Cameron:

Randall has talked to me several times about his going back into the mine, but I don't feel that it is a good practice to allow him to go back now.

Mr. Patterson:

Then you will not allow him to go back to work in the mine?

Mr. Cameron:

No, not at this time.

Mr. Patterson:

Well, I will take that report to him and if he wants us to take it up any further we will arrange to do so.

Mr. Cameron:

All right.

Mr. Patterson:

I would like to take up the case of Willie McCray, colored, Section Helper for Mr. Elza B. Jones in No. 60-R Heading, No. 11 Mine, who wants to change jobs with Irvin Nathan, Colored, Mine Helper for Mr. N. O. Ousley, on the Extra Timber Crew. McCray has asked Mr. Carson, Mine Foreman, to let him make the change and Mr. Carson told him to come to see the Superintendent.

Mr. Cameron:

Willie McCray has not been to see me but if he wants to change jobs he can come to the office and sign a transfer requesting it and I will put another man in his place after I have talked with the Foreman.

Mr. Patterson:

Freeman Wood spoke to Mr. Carson, Mine Foreman, about his catching extras on Skip Tender's job. They

have been using Edward Brown on the job and Freeman is an older man and thinks that he deserves the extra work as a Skip Tender. Wood said that Mr. Carson told him that he would have to see you before he could make any change.

Mr. Cameron:

Freeman has been offered a better job that he has, that of Drill Runner, and he declined to take it. If he does not want a better job when it is offered, I don't see why we should go to any effort to get him to take one that he wants.

Mr. Patterson:

This Skip Tender job was open when Freeman was asked to take the drill job and he said that he told you that he could not handle a drill. He was not asked to take the the Skip Tender job.

Mr. Cameron:

Freeman has never been a Skip Tender and Edward Brown has.

Mr. Patterson:

You know what you told me about Freeman taking a job as a Drill Runner. (That he had never drilled and would have to be taught).

Mr. Cameron:

Yes, and I told Mr. Carson to tell Freeman to come to see me and he did not come for four or five days.

Mr. Patterson:

Freeman told me that he would take a drill and try it.

Mr. Cameron:

That is what I thought but he told me he did not want it.

Mr. Patterson:

I asked Freeman why he did not take the drill, after he had talked to you, and he said he had changed his mind. We would like for Freeman to be trained to be a Skip Tender.

Mr. Cameron:

We have no Skip Tender's job open now but when there is the man that is entitled to the job will get it. I don't know whether Freeman would be the next man entitled to a Skip Tender's job or not.

Mr. Patterson:

Freeman feels that he is an older man than the man on the job now and that he is entitled to the extra shifts.

Mr. Cameron:

Freeman is not a Skip Tender and never has been and Edward is a Skip Tender and is only working extra.

Mr. Patterson:

We feel that Freeman is entitled to a better job and that is the job.

Mr. Cameron:

I don't say Freeman is not entitled to a better job. I offered him one and he didn't want it. When there is a better job open I will consider him but I can't say that I will give him any better job.

Mr. Patterson:

We will take this report back to Freeman and if he is not satisfied he will take it up further.

Mr. Cameron:
That is all right.

Mr. Patterson:
That is all we have today.

Meeting adjourned at 10:40 A. M.

E. T. PATTERSON.

C. B. CAMERON,
Superintendent—Ishkooda,
J. I. WILLIAMS,
Secretary.

4401 T. C. I. EXHIBIT 30-C.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.
Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office, February 8, 1939.

Those present were:

Mr. T. S. Bridges, Division Engineer,
Mr. J. I. Williams, Supt's Clerk,

and the following committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman.

The meeting was called to order at 9:25 A. M., by Mr. T. S. Bridges, Division Engineer, as Chairman.

Mr. Bridges:

This is the regular monthly meeting. Do you have anything to discuss at this meeting today?

Mr. Patterson:

Yes, sir. There is a correction we would like to get made in the minutes of the last meeting. Where I said to Mr. Cameron "you know what you told me about Freeman Wood drilling". Mr. Cameron said that he had changed his mind and that was not in the mniutes. I would like for Mr. Cameron's statement to be shown in these minutes.

Mr. Patterson:

Continuing the case of Freeman Wood: Mr. Cameron stated at the last meeting that the skip tender job was not open and that Edward Brown was catching extras on that job and that Wood would have to be trained. Mr. Cameron also stated that when the skip tender's job is available the man that is entitled to the job will get it. Mr. Darden is back at work and Brown is still on the skip tender's job and we contend that Wood is entitled to the skip tender job now.

Mr. Bridges:

Where has Darden been?

Mr. Patterson:

Darden was off sick but is back at work now. I spoke to Mr. Darden and asked him if he ever expected to go back on the skip tender job and he said "no". I asked him if he changed jobs wth Brown and he said "no". That indicates to us that the skip tender job is open.

Mr. Bridges:

Why do you think that Freeman Wood is entitled to the job?

Mr. Patterson:

Because he is an older man with the Company than Brown.

Mr. Bridges:

Has Wood ever been a skip tender?

Mr. Patterson:

He has never been a regular skip tender but has worked as skip tender at Wenonah.

Mr. Bridges:

I don't see where we can do anything about it. I would not make any changes now. The way the matter stands now is the way it will stay as far as I am concerned.

Mr. Patterson:

The reason I brought this case back is because Mr. Cameron stated that the men entitled to the skip tender job, when it was available, would get it, and after Mr. Darden has returned to work we feel that Wood is entitled to the skip tender job and I would like to have Mr. Cameron's decision on the case before we pass it on to Mr. Ball.

Mr. Patterson:

Next we want to continue the Lon Randall case. Mr. Cameron stated that he did not think that Randall had become accustomed to his one eye enough to go inside. Randall lost his eye last March and the Doctor states his eye is as well as it will ever be and the Committee decided at the last meeting to continue this case until this meeting and to try and get a definite time set by the Superintendent that Randall would go back on his regular job.

Mr. Bridges:
Has Randall been promised a job back in the mines?

Mr. Patterson:
Yes, sir, he was promised his job as soon as he was able to go back in the mine.

Mr. Bridges:
I would not promise you that we could put Randall back now. I would rather case not be taken any further until we see Mr. Cameron:

Mr. Patterson:
Our intentions are to try to co-operate with the Superintendent as much as possible and I would like to give some evidence in these minutes relative to the Randall case in order that you might take the matter up and get a decision within the next few days. The evidence is: Randall knows of a man at Wenonah that lost his eye within three weeks after he lost his and that man is already back in the mine. I believe the man's name is Booker Black at Wenonah. We feel that Randall will never become accustomed to the use of his eye in the mine until he is put back and given a chance and that is our contention that he should be put underground now and on his regular job.

Mr. Bridges:
I will see Mr. Ball within the next few days, if possible, and if there is anything we can do about either case I will let you know when you come in the office. I would rather, if possible, you would put off a meeting with Mr. Ball until you have seen Mr. Cameron.

Mr. Patterson:
We will take this up with the General Committee and if possible we will hold these two cases up until Mr.

Cameron gets back and take them up with him again before we see Mr. Ball.

Mr. Bridges:
All right.

Mr. Patterson:
That is all that we have to discuss today.

The meeting adjourned at 10:12 A. M.

E. T. PATTERSON,
For the Committee.

C. B. CAMERON,
Superintendent—Ishkooda.

4404 T. C. I. EXHIBIT 30-D.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.
Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office, March 8th, 1939.

Those present were:

Mr. T. S. Bridges, Division Engineer,
Mr. J. I. Williams, Supt's Clerk,

and the following committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers.

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman,
Elmore Hitchell, (C), Committeeman,
Dennis Hart, (C), Committeeman.

The meeting was called to order at 9:00 a. m., by Mr. T. S. Bridges, Division Engineer, as Chairman.

Mr. Bridges:

This is the regular monthly meeting. The meeting is now open. Does the committee have anything to discuss with me today?

Mr. Patterson:

Mr. Bridges, I guess we will have to pass the cases of Mr. Freeman Wood and Lon Randall which are pending. I spoke to Mr. E. M. Ball about these cases, while at a meeting in his office, and he wanted us to let them wait until Mr. Cameron came back to work and take them up with Mr. Cameron again. Mr. Cameron is not back to work yet and we don't know when he will be and the committee feels that something should be done about these two cases. The men themselves feel that way too. Woods feels that he should be skip tender now and Randall feels that he should be working in the mine.

Mr. Patterson:

About the case of Freeman Wood. I came in here and spoke to Mr. Cameron about Wood and Mr. A. W. Killian. Mr. J. M. Lemley was asking for a change off of a drill runner job and I asked Mr. Cameron to let either Wood or Killian take Lemley's place as drill runner. He said that he had put Killian on a drag operator job. I then spoke to him about Wood being put on the drill that Lemley was giving up and he said that it would not be fair to T. J. Sizemore as Wood had never drilled and he asked me if I would take Wood as a drill runner. I told him that I would and he said that he did not think it would be fair to either me or Mr. Sizemore. Then the skip tender's job was open and we brought up a complaint, part of which is in the minutes of a meeting, for

Wood to take the skip tender job. Just before Edward Brown was put on the skip tender job Wood was offered a drill runner job by Mr. Cameron and he refused or said that he did not feel that he could handle the drill or did not want it at that time and we feel that Wood should have the skip tender job because he is an older man than Brown. We feel that Wood was offered the drill at that time to offset the putting of Brown on the skip tender job because the skip tender job was open at the time. Wood said that is the reason that he changed his mind on the drill runner job.

Mr. Bridges:
I don't feel like Wood is entitled to the skip tender job.

Mr. Patterson:
Why not?

Mr. Bridges:
Because he was offered a better job and refused it.

Mr. Patterson:
He was offered the better job to offset the putting of Brown on the skip tender job.

Mr. Bridges:
I don't think so. Wood just feels that way.

Mr. Patterson:
I feel that way too.

Mr. Bridges:
I feel that Wood had a fair deal.

Mr. Patterson:
We don't. If he was entitled to a drill runner job when the drill job of Mr. Lemley was open he would

have been given it but he was not offered the job and then they threw the drill in his face when the skip tender job was open.

Mr. Bridges:
I can't do anything about it.

Mr. Patterson:
We feel that there should be something done about it. We will take it to Mr. Ball. It has gone to be done some way.

Mr. Bridges:
I am not going to do anything about it. I feel he has been treated fair.

Mr. Patterson:
We don't.

Mr. Patterson:
About the case of Lon Randall. Mr. Bridges, we feel like you could do something about that. He is a man that has been out of the mine and the doctor says that he is as well as he will ever be. He will have to go into the mine before he can become accustomed to the use of his eye in the mine. He wants to get back in the mine where he will be out of the weather.

Mr. Bridges:
I will see what I can do about that.

Mr. Patterson:
Mr. Bridges, we have a complaint from Mr. Walter McDowell about the drag operator's job in the Southwest Haulage with Mr. Burl Seritt. He feels that he is entitled to a drag because he is an old drag operator and

when he came to No. 11 Mine he took a drill because it was all that was open. Mr. Cameron said it would not be permanent, that he would try to find something else for him. Then when this drag operator job in the Southwest Haulage was given to someone else Mr. McDowell complained about it and since then there have been several drag operator jobs open. McDowell is an older man than Rufus Jones, Colored, who was placed on the drag in the Southwest Haulage and McDowell is a drag operator and also a drill runner.

Mr. Bridges:

Did McDowell ask for a drag operator job when he first came up here?

Mr. Patterson:

When he came up here to go to work Mr. Cameron told him he was going to put him on a drill but he would try to get something else for him.

Mr. Bridges:

McDowell has never been in here to ask for a drag operator job.

Mr. Patterson:

He don't have to come in here. He asked the Mine Foreman.

Mr. Bridges:

As far as the Southwest Haulage job is concerned I did not know that McDowell wanted to change jobs until the afternoon before the job was to be put on.

Mr. Patterson:

The Mine Foreman knew it because McDowell had asked him for this drag operator job. McDowell had been running as extra Drag Operator in 60-R.

Mr. Bridges:
I can't do anything about it now.

Mr. Patterson:
You knew about it before Burl McDaniel came over and took this other job.

Mr. Bridges:
That is only a temporary job.

Mr. Patterson:
He could have taken the job temporarily too. We will take his case up with Mr. Ball.

Mr. Patterson:
Roy Patterson, on Mr. C. E. Brown's shift, has a complaint about a drag operator job because there have been two or three drag operator jobs open on that shift and he has been running as extra drag operator. Some new men have been placed on the drags, J. H. Syphurs and others.

Mr. Bridges:
When did Patterson ask for a drag operator job?

Mr. Patterson:
He asked for a drag operator job when he was running as extra drag operator in Pete Dulaney's place during the latter part of last year when vacations were being given.

Mr. Bridges:
Why does he want to change jobs? He can make more money on a drill runner job than on a drag operator job.

Mr. Patterson:
He had rather run a drag than a drill on account of the water and the quarrying, they are against his arms.

Mr. Bridges:
I can't do anything about it.

Mr. Patterson:
We feel this way about it. All of the men who were placed on jobs were Brotherhood men except Burl McDaniel and it looks like discrimination.

Mr. Bridges:
You know that the Head Miners choose their men with the approval of the Superintendent.

Mr. Patterson:
No, sir, I don't.

Mr. Bridges:
Mr. Rhodes asked for Brady Franklin as a drag operator in his place and we let him work him. The men on those jobs are placed with the approval of the Superintendent.

Mr. Patterson:
Mr. Bridges, we feel that we should go according to the contract.

Mr. Bridges:
We are trying to do that.

Mr. Patterson:
We feel that the man with the most age with the Company should have the job whether he be a Brotherhood member of a Smelter member, and if they are placed on jobs that way we will have no complaint.

Mr. Bridges:
Just because a man has the most age with the Company is no reason he would have preference. He should have the ability to handle the job.

Mr. Patterson:
He should be given a chance.

Mr. Bridges:
These men, McDowell and Patterson, I feel, have been given all they deserve. They are drill runners and that job pays as much money as the drag operator job.

Mr. Patterson:
We understand that but there are hardships on some jobs that are not present on others. Mr. J. H. Syphurs was put on one of these drag operator jobs.

Mr. Bridges:
Syphurs has been a Head Miner.

Mr. Patterson:
McDowell and Patterson are older men than he and they can drill and operate a drag too.

Mr. Bridges:
There is nothing we can do about that. We feel that what we did is right.

Mr. Patterson:
We don't feel like it is right and we will carry their cases to Mr. Ball as soon as we get these minutes.

Mr. McBrayer:
Mr. Bridges, if you had fifteen years service with the Company and I only had five years service, with the same ability, and there was a job open do you think I should have the job?

Mr. Bridges:
No, I think I should have it. The way I feel is that we can not continuously be swapping men around in the

mine just for the convenience of the men because it would tear up the operation of our organization.

Mr. Patterson:

That is just the way we feel about it. If these men will be put on the jobs they should have we feel that they would be satisfied and the organization would not be torn up. McDowell is an old drag operator and these men came back to work and took the jobs offered and now these other jobs are open, which they are entitled to, and younger men with the Company are being put on them. We feel that the younger men should take the hard jobs and let the older men have the easier jobs to which they are entitled.

Mr. Bridges:

I still feel that they have been given fair treatment.

Mr. Patterson:

Well, that is as far as we can go here. We will have to take it up with Mr. Ball. That is all we have.

The meeting adjourned at 10:05 A. M.

E. T. PATTERSON,
For the Committee.

C. B. CAMERON,
Superintendent—Ishkooda.

4411 T. C. I. EXHIBIT 30-E.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.

Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office March 2rd, 1939.

Those present were:

Mr. C. B. Cameron, Superintendent,
Mr. T. S. Bridges, Division Engineer,
Mr. J. I. Williams, Supt's Clerk,

and the following committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman,
Mr. W. F. Wood, Jr., Committeeman,
Elmore Mitchell (C), Committeeman.

The meeting was called to order at 9:10 A. M., by Mr. C. B. Cameron, Superintendent, as Chairman.

Mr. Cameron:

This is a special meeting that was requested by Mr. E. T. Patterson to take up a matter that he said could not wait until the next regular scheduled meeting. The meeting is now open.

Mr. Patterson:

Mr. Cameron, the complaint that we have is from Mr. Lem Scruggs, White, for the Assistant Mine Foreman job

in Mr. W. C. Burgess' place at No. 11 Mine, which has been pending for several days. Mr. Scruggs feels that he is entitled to that job as he is an older man than Boyd B. Tipper and should have had the job instead of Tipper.

Mr. Cameron:

There has been no Assistant Mine Foreman appointed at No. 11 Mine. Mr. Tipper is Ore Inspector.

Mr. Patterson:

Tipper is acting as Assistant Mine Foreman. He is carrying the maps and is measuring the places.

Mr. Cameron:

There has been no Assistant Mine Foreman appoint. Mr. Burgess is very sick in the hospital and Mr. C. E. Brown, Mine Foreman, and Mr. Tipper are trying to carry Mr. Burgess' work on between them as best they can.

Mr. Wood:

Mr. Cameron, don't you think that the man that is the most capable of handling the job should have been put on as Assistant. Mr. Scruggs feels that he should have had the promotion.

Mr. Cameron:

I told you that there has been no promotion made.

Mr. Woods:

Mr. Scruggs is more capable of handling the Assistant Mine Foreman Job than Tipper.

Mr. Cameron:

That would be for the Management to decide.

Mr. Patterson:
It seems to us Mr. Cameron that you are absolutely ignoring the contract.

Mr. Cameron:
I am not ignoring the contract.

Mr. Patterson:
You just stated that Tipper was doing the work of Assistant Mine Foreman.

Mr. Cameron:
I did not say that. I said that Mr. Brown and Mr. Tipper were doing Mr. Burgess' work between them.

Mr. Patterson:
We feel that there was a promotion for the man that was put on the job. Tipper is working nine (9) hours and is getting time and one-half for overtime. Mr. Scruggs feels that he is entitled to that extra time and to the job.

Mr. Cameron:
I don't think that he is entitled to it.

Mr. Patterson:
That is where we feel that you are ignoring the contract and we would like to know if you intend to make any changes.

Mr. Cameron:
No, I do not.

Mr. Patterson:
That is all that we have unless you have something to say to us regarding the other cases that we took up.

Mr. Cameron:
No, I have nothing to say regarding them. Those cases have gone to Mr. E. M. Ball.

Mr. Patterson:
That is all.

The meeting adjourned at 9:25 a. m.

E. T. PATTERSON,
For the Committee.

C. B. CAMERON,
Superintendent—Ishkooda.

4414 T. C. I. EXHIBIT 30-F.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.

Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office, April 12th, 1939.

Those present were:

Mr. C. B. Cameron, Superintendent,
Mr. T. S. Bridges, Division Engineer,
Mr. J. I. Williams, Supt's Clerk,

and the following committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman,
Elmore Mitchell (C), Committeeman.
Dennis Hart (C), Committeeman.

The meeting was called to order at 9:00 a. m. by Mr. C. B. Cameron, Superintendent, as Chairman.

Mr. Cameron:

This is the regular monthly meeting. The meeting is open.

Mr. Cameron:

I have been instructed to advise this committee that relative to the request for putting Lon Randall, Colored, back to work in the mine, Dr. Noland advises that he does not approve permitting this employee to return to work in the mine.

Mr. Patterson:

Now about Freeman Wood's case. Freeman says that he will accept the section helper job offered him provided he be promoted when a job such as skip tender or drag operator, which would be a promotion for him, is open and to which he is entitled.

Mr. Cameron:

We will give him a job as section helper but as to promising him a further promotion we can not do that. When there is an opening for promotion he will be considered.

Mr. Patterson:

Mr. E. J. Nichols, who is drilling for Mr. E. B. Jones, on the hill, said that he asked you for a job in the development work and you told him there was no job open. Since then he has heard of two jobs being open and he was not given either of them.

Mr. Cameron:

Nichols came to see me sometime ago and requested he be given a chance as a Timberman. Last week he

came in and told me that he had done a great deal of narrow work and that he would like to be given a chance in the development work. There has been no job open in the development work that would be a promotion for Nichols.

Mr. Patterson:

He wanted to be put on as a drag operator or drill runner in the development.

Mr. Cameron:

We can not change a man from a drill runner in a stoping heading to a drill runner in development as the basic rate is the same. Going from a drill runner job to a drag operator job is essentially a demotion although the base rate is the same.

Mr. Patterson:

What he is asking for in the development is the bonus. He figures that is a promotion. The two men that were put on in the development are younger men and he feels he should be given a chance when these jobs were open.

Mr. Cameron:

Incentive earnings are up to the efforts of the man himself and I am not changing one man from one occupation to a like occupation in another place.

Mr. Patterson:

That is all we have this morning.

The meeting adjourned at 9:30 a. m.

E. T. PATTERSON,
For the Committee.

C. B. CAMERON,
Superintendent—Ishkooda.

4416 T. C. I. EXHIBIT 30-G.

Tennessee Coal, Iron & Railroad Company,
Ishkooda Division.

Minutes of Meeting.

Held in Superintendent C. B. Cameron's Office May 10th, 1939.

Those present were:

Mr. C. B. Cameron, Superintendent,
Mr. J. I. Williams, Supt's Clerk,

and the following committee representing the members of Ishkooda Local No. 153 of the International Union of Mine, Mill & Smelter Workers:

Mr. E. T. Patterson, President,
Mr. L. H. McBrayer, Committeeman,
Dennis Hart, Col., Committeeman.

The meeting was called to order at 9:00 a. m., by Mr. C. B. Cameron, Superintendent, as Chairman.

Mr. Cameron:

This is the regular monthly meeting. The meeting is open.

As per my conversation with Mr. Patterson the other day, I want to quote:

"The future policy of the Company as it has to do with the employment of employees who through an accident or for any other cause loses the sight of one eye will not permit such employee to work under any consideration

underground in any of the Company's mines. The Company will continue as in the past, wherever possible to do so when a vacancy occurs or an opening is available, to give preferential consideration to employees who have become partially incapacitated for such work on the surface as their ability permits.

"It is hoped that our employees will appreciate that such a policy has in mind their protection, as it is readily understood that employees so handicapped are subjected to a much greater degree of hazard than other more fortunate employees not having such impaired vision."

Are there any comments?

Mr. Patterson:
No, sir.

Mr. Cameron:
Do you have anything to bring before the meeting today?

Mr. Patterson:
We have the case of John D. Richardson, Colored, Badge No. 6033. On April 10th, 1939, the drag operator in Julius Hick's place in No. 11 mine was on vacation and Richardson had previously made extras in the drag operator's place. On this occasion one drill runner was off and they used Richardson as drill runner on the 10th and 11th of April and Richardson spoke to me about this and as one of the committeeman I spoke to the Mine Foreman about it. The Mine Foreman said that he was using Richardson as a drill runner on account of shortage of men. On April 12th we had a meeting here. On the 13th we went back to the mine to work and the regular drill runner had returned to work and Richardson was put back as section helper. I asked the Mine Foreman

about Richardson going on the drag operator job and he said he had orders to leave the drag operator as he was. On the afternoon of the 13th I came in and spoke to you about it and you stated you would not make any change for just two or three days. I asked for a meeting and you refused, saying these things could be taken up at the regular monthly meeting. This committee feels that Richardson has been discriminated against on account of his joining the union because before he joined the union he caught one extra, the only available extra since he has been in the heading, as drag operator. For these three days that he was deprived of the privilege of working on drag operator rate we are asking that some provision be made and we would like an answer from you as to what you intend doing about it.

Mr. Cameron:

The replacing of men who are on vacation or off for some other reason is strictly a function of the Management.

Mr. Patterson:

Not considering seniority rights, ability or anything stated in the contract?

Mr. Cameron:

The best men available for these temporary vacancies are the men that will be used.

Mr. Patterson:

The committee feels just as I stated before and we would like some answer from you.

Mr. Cameron:

As I recall this case James Knox, Colored, drag operator in this heading was on vacation; Sam Jackson, Col-

ored, drill runner in this place reported off the same morning due to a death in his family, Richardson was placed on the drill and Willie Lee Johnson, Colored, was placed on the drag. When Jackson returned to work on Thursday morning he took his regular job on the drill and Richardson went back on his regular job as section helper and there was no reason for further changes.

Mr. Patterson:

Richardson had the age on this other man, he had the ability and according to the contract he was supposed to have had this job as drag operator and owing to his belonging to the union he did not get the job. Then you are not going to do anything about it?

Mr. Cameron:

There is nothing to do about it.

Mr. Patterson:

I would like for you to explain how the extra time is being distributed.

Mr. Cameron:

There will be no division of time. The work on idle days will be done by the crews that would do the same type of work if it was done on a regular operating day. When there is timber, track or chute work to be done the timber, track or carpenter crew will do the work. When the slope needs quarrying drill runners will do the quarrying and when the slope is to be scrapped section helpers will do that work.

Mr. Patterson:

We have a complaint about Troyt Arthur, White, at No. 13 Mine, as to his catching extras continuously every week and the pipemen and other men have not been catching extras every week.

Mr. Cameron:

As I stated before there is no division of time or catching extras. Due to men being on vacation and due to the fact a good many men are laying off from work it has been necessary to supplement these track crews and timber crews, by men who were best suited to do this work.

Mr. Patterson:

Then Troyt Arthur is the best man to do the work?

Mr. Cameron:

Troyt Arthur has been a Mine Helper working on track prior to the time he was placed on the sinking hoist engine and is the logical man to use on the track crew.

Mr. Patterson:

You don't think the other men could do the work?

Mr. Cameron:

If we need them we will use them but we will not divide time.

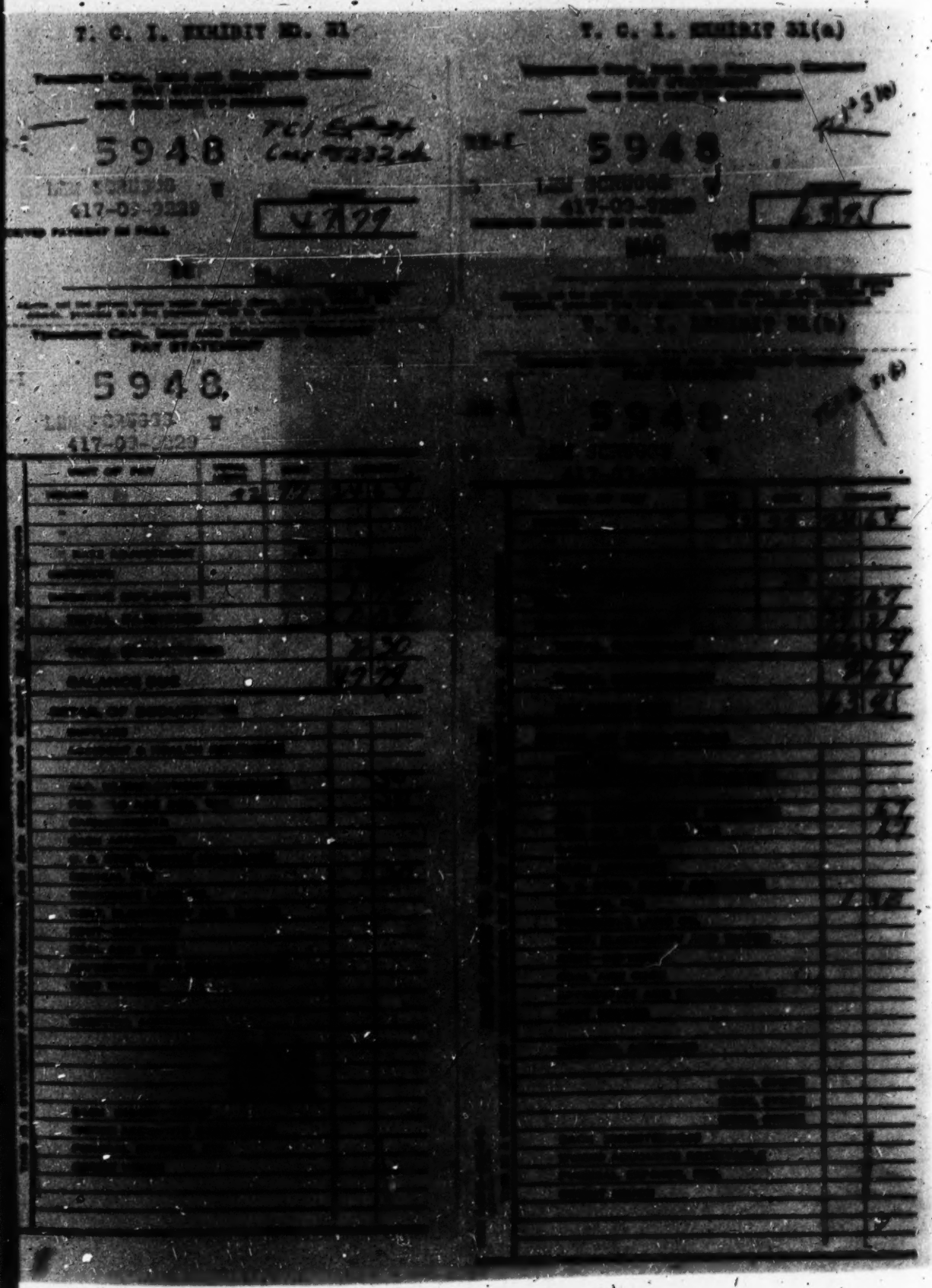
Mr. Patterson:

Well, that is all that we have today.

The meeting adjourned at 10:05 a. m.

E. T. PATTERSON,
For the Committee.

C. B. CAMERON,
Superintendent—Ishkooda.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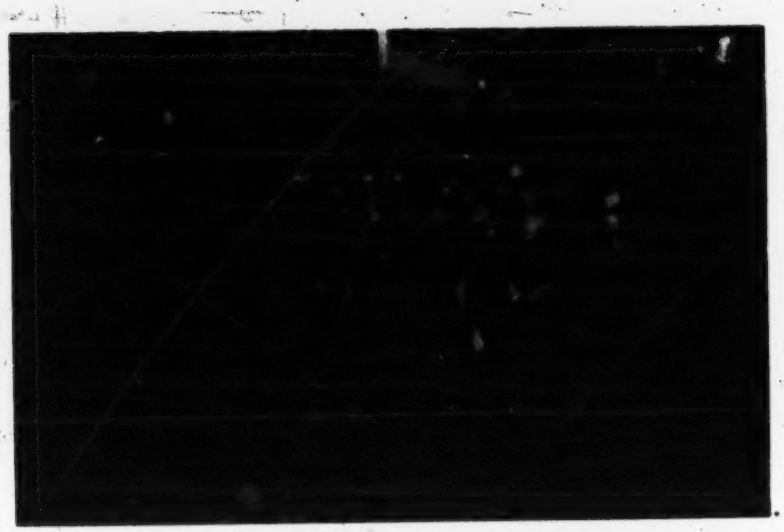

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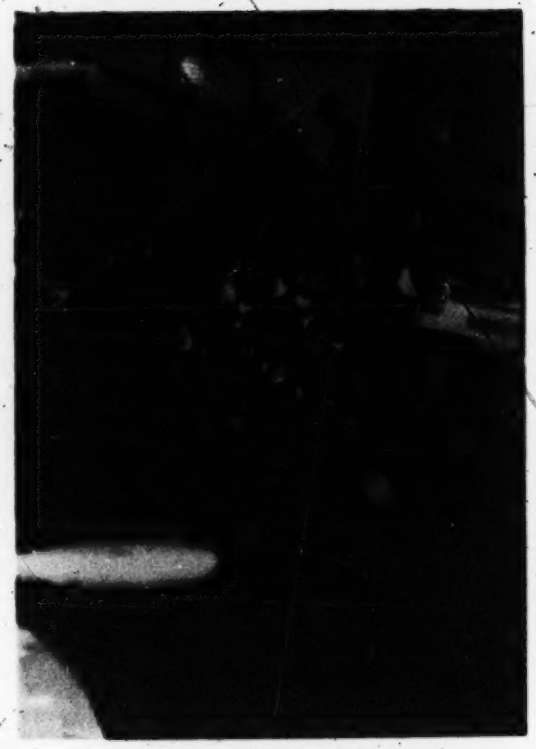

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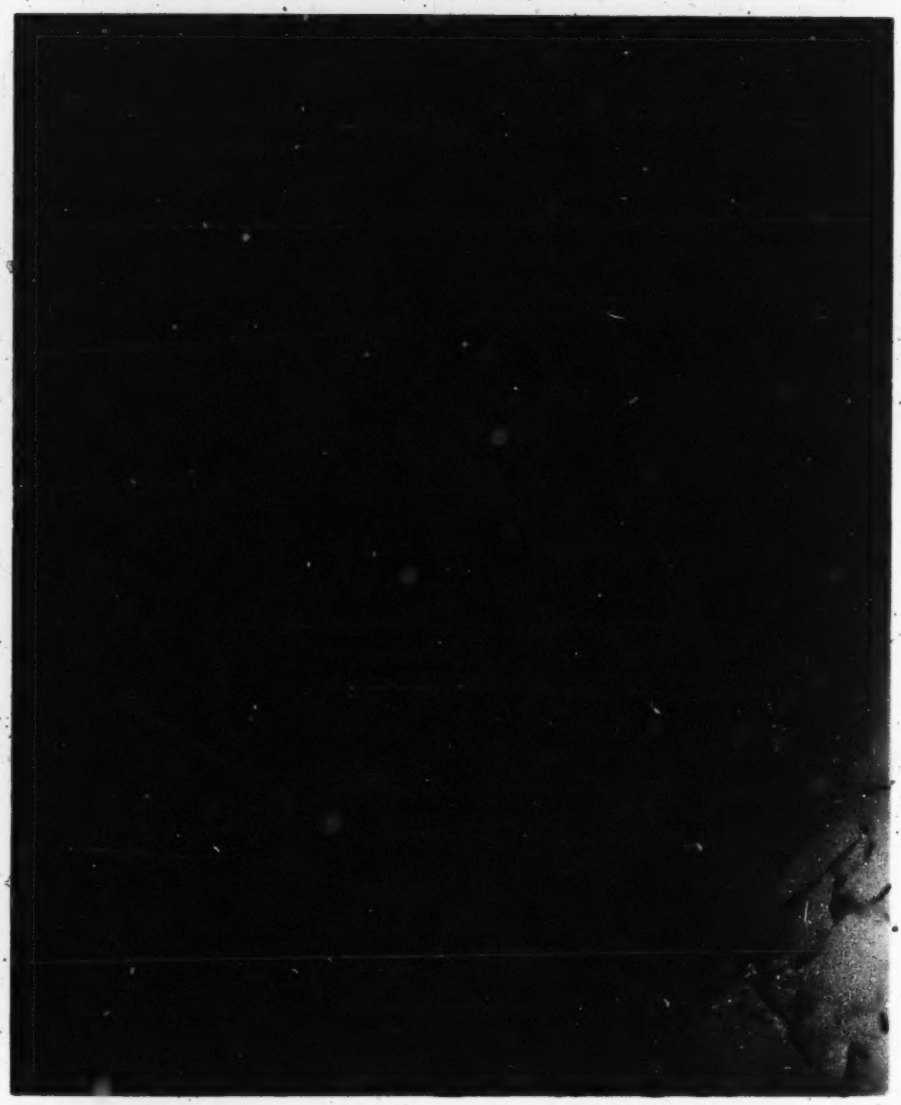

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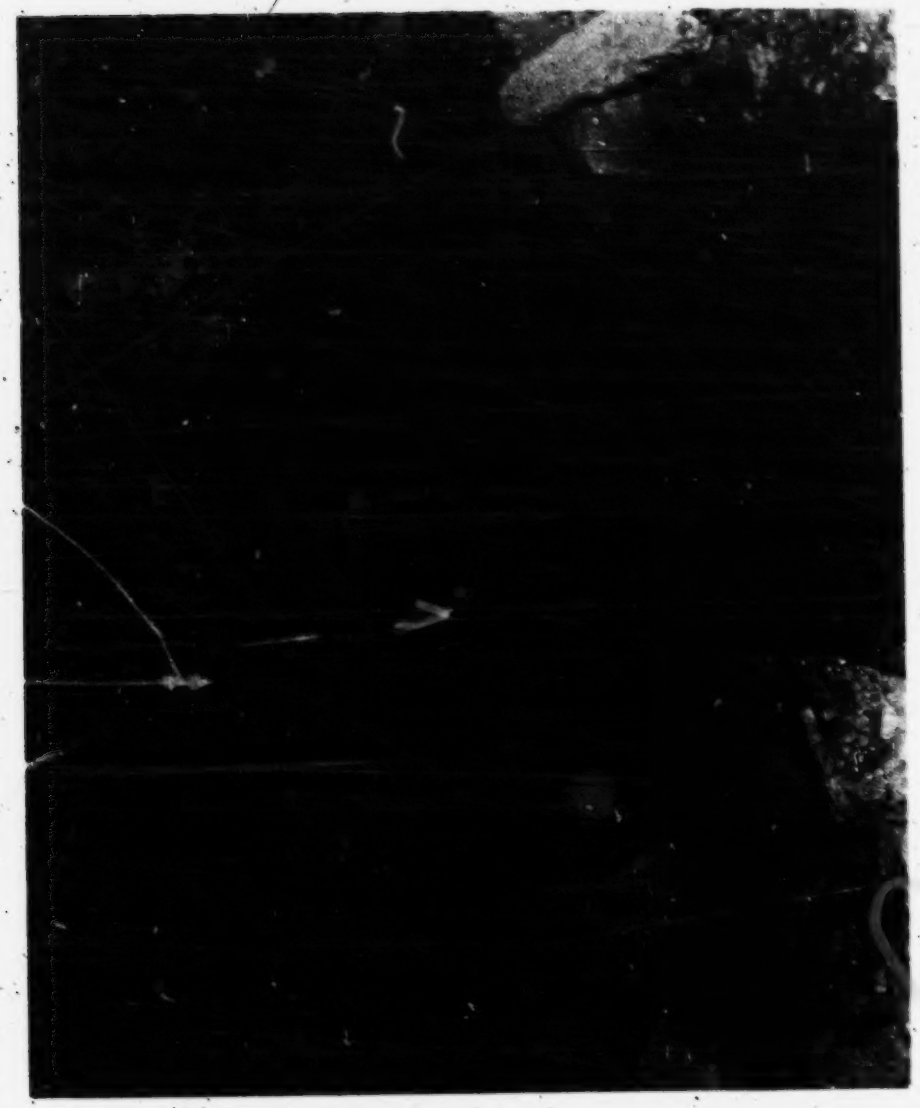

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Sloss-Sheffield

Steel & Iron Company

RULES
and
REGULATIONS

Governing the Safety of Employees
of the

Sloss-Sheffield Steel and Iron Co.

SLOSS ORE MINES

MAY, 1937

PREFACE

The management of the Sloss-Sheffield Steel and Iron Company, desirous of having its plants operated safely, finds it necessary to gather together in book form the existing and implied rules for the better protection of employees and better understanding of the Company's policy.

The safe working of our plants is everybody's job and the Company expects each and every employee to observe and obey the rules and asks further that employees coöperate by reporting promptly any violation of rule, any dangerous condition that may exist, make suggestions for new safety devices or practices and help warn new and inexperienced men, for, though experienced miners, they are not experienced in our workings.

The violation of rules will not pass unnoticed, and if proven unsafe no workman will be retained. We intend to be fair and promise that no one will be treated unjustly, but everyone must obey rules, avoid accidents, and coöperate in every way with the safety policy of the Company.

"There are no non-preventable accidents."

Sloss-Sheffield Steel & Iron Co.

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SAFETY ORGANIZATION

1. All safety work shall meet the approval of the Plant Superintendent.

2. General safety meetings shall be held once a month. At these meetings unsafe practices shall be discussed, accident statistics reviewed, changes or additions to rules announced, suggestions invited and plans for future work laid out. The meeting shall be conducted by or under direction of the Superintendent.

3. Foremen's meetings shall be held twice a month and attended by Superintendent, Mine Foreman, Master Mechanic, Plant Accountant, Doctor, Mining Engineer, Safety Engineer and such sub-foremen as can be spared from their work. The Superintendent shall be permanent chairman of this meeting.

The object of these meetings is to discuss current safety work, accident data and prevention, discussion and report of progress on recommendations of Plant Investigation Committee, safety and safe practice.

4. A Plant Investigation Committee shall report in detail and in writing to Superintendent and Safety Engineer on all accidents. This committee shall be composed of three white workmen (other than Mine Foremen) and two colored workmen. Each white man shall serve three months and each colored man shall serve two months, so that one new white man and one new colored man shall be on the committee each month.

GENERAL RULES

1. A copy of these rules must be supplied to each new workman by the Employment Clerk.

2. If in doubt as to the meaning of any rule, apply to the Superintendent or your foreman for an explanation.

3. Know all the special rules covering your work, make sure your working appliances are safe, and, if not, report to your Foreman this or any other matter that you think may cause an accident.

4. Vigilance and watchfulness promote safety. To avoid danger adopt the safe course. Employees must not trust to the care of others when their own safety is involved.

5. Employees are forbidden to take short cuts through dangerous places. Keep to the appointed traveling ways. This applies also to the surface. Do not cross railroad tracks, tipple tracks, or even wagon roads, before looking both ways.

6. Wrestling, throwing of material and general "horse play" is prohibited. Fighting while in the performance of duties is prohibited and will probably result in discharge of offending parties.

7. Any person coming to work under the influence of liquor will be discharged.

8. If you are injured, no matter how slightly, report to Foreman and to Doctor. A slight injury neglected often results seriously.

9. Do not fool with compressed air. Never blow the air on anyone. It may enter his body and injure or kill him.

10. All persons not authorized by the Electrician are forbidden to work on electrical apparatus. Never touch wires of any kind, as it may result in death. Before doing any work where there is danger of coming in contact with electric wires, notify the Electrician, who will see that conditions are made safe.

11. Do not leave your work to go to other parts of the plant unless on Company business.

12. In all new work or repairs the surrounding premises must be kept as clean and orderly

as possible. Boards with nails sticking up must not be left laying around.

13. No job must be started and no job is finished unless everything is made as safe as possible. On any job, when in doubt, take the safe course.

14. Use judgment in lifting to avoid strain or hernia.

15. In piling brick, cement, lumber, timbers, etc., care must be taken that the stability of the piling be well within safety limits. Many accidents have been caused by falling of material improperly stacked.

16. Keep your tools in safe working condition. Do not use hammer, sledge, chisel or bar on which the head is burred or so hard that small pieces will flake off.

RULES FOR MINE FOREMAN AND HIS ASSISTANTS

1. The Mine Foreman has direct supervision over all inside employees.

2. The Mine Foreman and his assistants direct the working forces of the mines, maintain proper discipline, inspect and see that all workmen and working places conform to the safety policy of the Company.

3. The Mine Foreman and his assistants must be continually alert to detect unsafe workmen, unsafe conditions and unsafe practices.

4. The Mine Foreman and his assistants must personally investigate immediately every case of personal injury and make a report to the Superintendent. He must take steps to prevent a recurrence of such accidents.

5. The Mine Foreman and his assistants must treat all employees with courtesy, be open to

safety and other suggestions, investigate complaints and reports of conditions and take proper action as necessary.

6. The Mine Foreman and his assistants shall walk the slopes once a week to inspect track, loose rock in ribs and roof, and see that slope is kept clean.

7. The Mine Foreman and his assistants must see that all new men are properly instructed in their duties and must be properly impressed that they are safe men.

8. The Mine Foreman and his assistants must see the workmen are supplied with proper and safe tools and appliances.

9. In case the Mine Foreman suspects that any workman is the victim of any disease affecting the physical welfare of the workmen or whereby such disease would render the workman liable to particular hazard from even slight injuries, such workman must be sent to the Company Doctor and not allowed to return to work until the Doctor so releases him.

10. Foremen are required, upon visiting a working place, to stop crew from working and have a thorough examination of the roof and face made in his presence.

RULES FOR MEN ON ORE

(A) Head Miners—Drag and Hand Loading

1. Every head miner is responsible for the safety of the men working under him and must see that they observe the rules of the mine. In case of double shift operations of the working place, the drillman or drag engineer shall assume responsibility of the head miner working on opposite shift, regarding application of safety rules.

2. No head miner, except in case of sickness, must lay off without permission of the Mine

Foreman, and no working place shall be allowed to operate without a competent and experienced miner in charge.

3. Head miner or an experienced miner designated by the Foreman, must personally examine and test, with hammer and bar, roof, ribs and face of working place and see that all loose and dangerous material is quarried down. If the place cannot be made safe, stop work and call for the Mine Foreman or assistant. Any unusual condition must be reported to the Mine Foreman or assistant at once.

4. When timbers have been blasted out or fallen from under dangerous ground, men must not return to work until the timbers have been set or the place otherwise made safe.

5. All head miners must work in accordance with instructions of the Mine Foreman or assistant.

6. No head miner shall interfere with the chainer about his turn. Any irregularity must be handled with the Mine Foreman or assistant.

7. The head miners are required to furnish tools and must see that all tools and working appliances are in safe operating condition and see that the Company tools and equipment are not abused.

8. Head miners must pay particular attention to the instruction and care of new men.

9. Head miners must see that all tools and appliances are removed to a safe place at the end of each shift and before blasting is done.

10. Head miners must immediately investigate and obtain all facts in reference to any accident occurring in his heading or slope and take proper steps to prevent a recurrence of such accidents.

11. Head miners must watch out for old "guns" and failed holes. They must see that drill men are properly instructed and competent to avoid hazards inherent in their work.

12. Head miners must keep their places clean. Do not allow ordinary heading debris to be scattered around in aimless fashion; cleanliness promotes safety.

13. Head miners must drive their places according to specifications and to engineer's lines and grades.

14. Head miners or opposite shift drillman or drag engineer shall designate one of his crew to act as chainer or trammer, subject to approval of foreman. This man is to be permitted to ride cars only while tramming and he shall be governed by rules covering chainers.

15. Head miners must examine working place at least once each hour during the shift and more often when necessary.

16. Head miner shall see that any brows of roof ore or slate, which overhangs beyond the natural rib line, are taken down or supported by timbers until same can be drilled and shot down.

(B) Drill Men.

1. The drill men work under the instructions of the head miners or drag foremen or experienced miner properly approved by the Mine Foreman or assistant.

2. The drill men must personally examine the roof, ribs and face of his working place by means of hammer or quarrying bar and keep all loose ground quarried down. The place must be continually inspected during the shift and kept safe at all times.

3. Drill men, before setting up, must examine the face for old "guns" which may contain unexploded dynamite and for failed holes.

4. The drill men must see that all their tools and equipment are in safe working condition.

5. The drill men must see that all tools and equipment are moved to a safe place at the end of each shift and before any blasting is done.

6. The drill men must immediately report to head miner, drag foreman or assistant any unusual or unsafe condition.

7. Drill man must keep drill out of roof to prevent from "gunning" it, as this creates a dangerous roof condition.

8. The drill man must assume responsibilities applying to head miner when he is in charge of the working place, and is governed by all rules applying to the head miner.

(C) Drag Engineers

1. At the beginning of the shift the drag engineer must see that the equipment is in safe working condition, must oil all bearings and make possible slight repairs and adjustments before throwng in main switch.

2. In case of accident or trouble to electrical or mechanical apparatus, call for the electrician or mechanic.

3. The motor must be safely anchored down after each move.

4. The drag engineer must not move engine without a clearly understood signal and then only when chute men are in the clear.

5. On leaving machine at end of shift, leave switch out, controller in neutral, ropes in clear of track, and open main switch.

6. To renew fuses, always open main switch. No fuse other than those provided for the purpose shall be used.

7. Engines must be kept clean.

8. Drag engineers, working opposite shifts from the head miner, shall assume the duties and responsibilities of the head miner and shall be governed by all rules applying to head miner.

(D) Miners and Muckers

1. Miners and muckers shall work under direct supervision of head miner.

2. Miners and muckers must use due diligence in their work and be careful at all times for their own safety and that of their fellow workmen.

3. While the head miners must see that places are in safe working condition, this relieves the miner of no responsibility in this connection. He must know for himself that conditions are safe and must help make the place safe.

4. Care must be taken in handling of ore. Do not attempt to load too big a piece of ore by hand, as such may cause strain or rupture. Do not attempt to load rocks of "two men" size but sledge the rocks to "one man size." Miners must be careful and not undermine ore or rock pile while loading. The muck pile must be kept trimmed down to prevent rocks rolling on hands or feet.

5. While sledging rock notify your companions that they may turn their backs or get to safe distance from flying "sprawls."

6. Special care must be used in holding cars to the face while loading. It is strictly against the rules to chock cars with rocks. Use the safety sprags.

7. On drag work the face man must keep the face surroundings well quarried at all times.

8. The face man must keep in the clear of the dipper, ropes, skidder block and hangers at all times.

9. In drilling hanger holes drill them only in secure ground.

10. Never attempt to tighten hanger wedges or "change over" without first having a clearly understood signal from the drag engineer that the engine will not move.

11. In turning dipper over do not hold rope with hand or foot but fasten rope properly and get in the clear.

12. The "chute men" on drag work must use care in the handling and trimming of cars and have due regards for the safety of companions. Use safety sprags and safety chocks provided for holding cars.

13. Chute men must not go between engine and cars, cars and ramp, or engine and ramp while engine is in motion.

(E) Scrappers

1. Scrappers must be familiar with hoisting signals and handling of slope trips.

2. Scrappers must provide themselves with proper quarrying bars and bar down any loose rocks under which they would have to work.

3. Scrappers must report any unusual or unsafe condition to the miner, foreman or assistant with promptness called for by situation.

4. While scrapping the slope, scrappers must work under the eight-bell rule of hoisting signals.

5. The scrapper must load at points designated by the Mine Foreman or assistant.

6. While working in headings, scrappers must not tamper with drag or contractor's tools or equipment and must leave place in safe condition.

7. Scrappers must observe in general rules applying to chainers and to tramming.

RULES FOR HANDLING AND USE OF EXPLOSIVES

1. Explosives will be issued from the underground magazine at designated time only. Explosives will be removed from boxes at magazine by miner and placed in sacks provided for carrying same to working place.

2. Not more than one day's supply of explosives will be issued at one time.

3. Don't forget the nature of explosives. Only by sensible treatment can they be safely handled.

4. Don't smoke while handling explosives and don't handle explosives so near a light that there is danger from the flame or sparks.

5. Don't have a lighted lamp on your hat or stuck in a timber over the place where you are preparing charges.

6. Don't throw or allow packages of explosives to fall violently.

7. Dynamite must be stored in a locked box provided for the purpose. This box must be placed on the upper rib at least 150 feet from the face.

8. Caps shall be carried and kept only in the safety cap boxes provided for the purpose.

9. A locked cap and primer box provided for the purpose must be so used. The cap and exploder box must be kept on the upper rib at least 200 feet from the face and at least 50 feet from the powder box.

10. Don't crimp a cap with your teeth. Use a cap crimper. Be sure that fuse is cut squarely across with a sharp knife and push gently against the fulminate and crimp securely. In wet places smear soap on joint of fuse and cap.

11. Don't leave dynamite fuse or caps in a wet place.

12. Do not use fuse less than seven (7) feet in length. However, for blockholeing or popping rocks, fuse four feet in length may be used with permission of Mine Foreman.

13. Don't force a stick of powder with cap and fuse attached into a hole.

14. Use only wooden tamping poles.

15. Don't fire a charge to shake a hole and then immediately reload it, as the hole will be hot.

16. Do not shoot except at times designated as "shooting time." If you have rocks to "pop" obtain permission of Mine Foreman or assistant to shoot between "shooting times."

17. Don't fire a shot until everyone is out of danger. In special cases such as rock falls, shooting down dangerous rock, etc., men must be placed at all approaches to guard against anyone being endangered by the necessary blasting.

18. Don't remove dynamite from original cartridge when loading holes.

19. In loading holes, don't separate dynamite cartridge by dummies. This would leave unexploded powder in the bottom of the holes.

20. Don't use frozen or chilled dynamite.

21. Don't attempt to thaw dynamite. It will be thawed by underground temperature and issued only when thawed.

22. The following is the proper method for making up primers: Punch a hole about the size of a lead pencil either in end or side of cartridge, this hole to be a little deeper than the length of the blasting cap. Aim to keep the blasting cap in the center of the cartridge. Insert the blasting

cap and fasten the fuse securely to the dynamite cartridge with a string to prevent the cap and fuse being pulled out of the cartridge. Do not loop the fuse around the cartridge, as this may break the fuse and cause a misfire.

23. Not more than seven holes must be lit by one man, and two men should always be present while lighting a round. It is advisable for men lighting holes to have two carbide lights in case one should go out. The "sparkler" on both lamps should be in perfect working condition.

24. Any surplus powder must be returned to powder magazine or to locked box provided for the purpose.

25. Use wooden wedges and wooden mallets in opening powder boxes.

26. All holes must be "blowed" out with appliance provided for the purpose before charging holes.

27. All failed holes, misfires or holes containing unexploded powder must be reported immediately to the Mine Foreman, and no work prosecuted in the working place until the Mine Foreman has ruled on procedure of handling.

28. It is strictly forbidden to drill into or through old "guns."

GENERAL MINING RULES

1. At all times special care must be given to quarrying, particularly so after blasting. Every place must be provided with a quarrying bar and a slate bar and kept in good condition.

2. When a heading, slope or upset is about to hole through, men must be stationed at a safe place to warn anyone approaching that point until blasting has been completed. This rule must be complied with whether place is holing through to active workings or not.

3. In case of misfires, these must be reported to the Mine Foreman or assistant, to the opposite shift leader if in double shift places, and to men working in nearby places.

4. All gob piles must be kept three feet from track.

5. Drillmen or others using air must see that air is turned off before disconnecting hose.

6. Old timbers and ties must not be permitted to accumulate, but should be hauled to surface.

7. Loafing or loitering is forbidden. Travel manways where possible. If necessary to cross slope, exercise proper care to ascertain where the trip is and avoid the rope.

8. Trash and inflammable material must not be allowed to accumulate.

9. Workmen should give particular attention to the condition of their clothing. Loose, ill-fitting and ragged clothing must not be worn. The wearing of safety clothing is encouraged.

10. Riding of trips by unauthorized persons is forbidden and will result in immediate discharge.

11. Open lights must not be carried into feed room at stable.

12. Due care must be exercised in taking mules to and from stable and only authorized persons are allowed to drive mules.

13. Persons authorized to operate gathering hoists shall be governed by same rules as for hoisting engineers.

RULES FOR MEN ON HAULAGE

(A) Chainers

1. The position of a chainer being one of peculiar hazard, he must use special care and precaution to avoid danger incident thereto.

2. After signalling the hoisting engineer do not leave signal wires until the trip has moved in the desired direction.

3. Signals must not be given by any person other than those duly authorized.

4. "Fancy" or "trick" riding will not be allowed. Men must not ride on brake shoes.

5. If a trip has been stopped, a signal must not be given to move trip until is is ascertained why the trip has stopped.

6. Chainers must see that all trips have couplings properly made. Do not leave "knuck" with twisted couplings. Keep an eye out for defective couplings and defective ropes. In case of a defective rope stop the trip and notify Mine Foreman and Master Mechanic immediately.

7. Chainers must not allow anyone to ride loaded trips. Should anyone attempt to "steal" a ride, stop the chain and notify the Mine Foreman or assistant immediately.

8. Chainers must give signals according to Standard Hoisting Signals. No special or doubtful signal will be honored by the engineer. Should such signal be given while trip is in motion the hoist engineer will stop trip and be governed by the eight-bell rule.

9. Chainers must not ride loaded trips to surface except in line of duties and then only on "shake back" signal.

10. Chainers must not ride empty trips back into mine except on "shake back" signal.

11. Empty trips must never be hoisted except at man trip speed.

12. Chainers must inspect the trimming of loads before sending trip to the surface. Any loose or high rocks must be removed or placed in proper condition.

13. Chainers must wear their jumpers inside the bibb of their overalls. They must not wear loose or ragged clothes or worn out shoes.

(B) Trammers

1. All places must be provided with sufficient bed sprags to properly control the cars.

2. No one shall ride on cars except trammer, who shall ride on rear bumper of last car.

3. While tramming, the cars must be kept under control.

4. Under no circumstances must cars be "chocked" with rock. Use safety sprags or, where authorized, safety wooden chocks.

5. Not more than the duly authorized number of cars shall be trammed at one time.

6. Care should be taken in knucking cars properly and seeing that all couplings are properly made.

(C) Inside Hoist Engineers

1. The same rules applying to surface hoist engineers shall apply underground.

2. The Standard Hoisting Signals shall govern.

3. Examine condition of roof and ribs at beginning of each shift and report any unsafe condition to the Mine Foreman or assistant. Do not work until condition is corrected.

(D) Rules for Motormen, Trip-riders or Couplers

1. All locomotives shall be inspected daily, and they must not be removed from the motor-barn unless they are marked "O.K." with the appropriate date.

2. Motormen shall be responsible for the care of the locomotives in their charge and see

that they are well-lubricated and in good condition at all times.

3. All mechanical or electrical defects shall be reported to the mine electrician or master mechanic; any indications of low voltage on the line should be reported promptly to the mine electrician.

4. Each motorman shall make careful note of the condition of the haulageways over which he operates and report to the mine foreman any dangerous or unsafe place or condition, such as defective timbering, wiring or bonding.

5. Motormen shall stop their trips to throw switches, unless trolley-line switches are automatically controlled by trolley clips or otherwise.

6. Motormen shall not run at excessive speeds and shall have trip under control at all times. Man-trips shall not be pulled at a speed faster than six miles per hour.

7. It will be the duty of the motorman to give warning when approaching persons, animals, doors, sidetracks, or curves on haulageways.

8. Motormen will see that the sand boxes are filled and the sand pipes clear.

9. Motormen and couplers are positively prohibited from alighting while the locomotive is in motion to throw switches, to open doors, or for any reason except to protect themselves or others from injury in case of obstruction or derailment.

10. Motormen will not allow anyone to ride in the locomotive or on trips except those specially authorized to do so.

11. Making flying switches is prohibited.

12. The locomotive and all cars on a trip shall come to a full stop when attempting to couple or uncouple.

13. All motormen and couplers are forbidden to make a coupling while standing on or between the bumpers of cars or locomotives.

14. Back-poling by motormen will not be permitted except in places where pole cannot be turned.

15. When two or more locomotives are going into or out of the mine, they shall be kept at least 300 feet apart and under complete control within the authorized space limit.

16. No person, other than the motorman, will be permitted to ride the front end of a locomotive.

17. Motormen must not attempt to oil locomotives, open sand pipes, adjust headlights, or do any other repair work on locomotives in motion.

18. No employees are permitted to couple or uncouple cars except designated motormen and couplers, unless instructed to do so by the foreman.

19. No coupler shall ride between cars. When motor is pulling empties he must ride rear car, and, when pushing empties, he must ride inside second car from front end of trip, provided there is sufficient roof height for him to enter and leave empty cars.

20. Cars must be safely secured when standing on a grade.

21. One or more empty cars must be placed between the locomotive and a car hauling rails, pipes, or similar material.

22. A motorman shall not get off his motor without closing the control and shall not move the locomotive without being seated in the cab.

23. No one is permitted to ride between cars on any trips whatsoever. Motormen and coup-

lers must not wear loose clothing; trouser legs must be worn inside of high shoes, leggings, or sock legs and jumpers inside of overalls. Rubber shoes and short wrist gloves should be worn.

24. Motormen shall not move trips until given the proper signal by coupler.

25. Motormen shall not place the trolley pole on the wire while standing by the side of the locomotive; they shall see that the controller is on the "off" position and the brake set before placing the trolley pole on wire.

26. The motorman shall not leave the locomotive unless the light is burning brightly on at least one end, the reverse lever in neutral position, and brakes set securely and some approved device is used to prevent the brakes from unwinding.

27. Motormen and couplers must give special attention to materials ordered and must deliver them promptly.

28. Trip-riders will be held responsible for replacing all derailers and safety blocks when the trip or locomotive has passed through them.

29. Trip-riders shall not run along the tops of empty or loaded cars.

30. Motormen shall not pass a red signal light; if signal lights will not burn, a motorman should send his brakeman ahead at least 100 feet to act as flagman.

31. Motormen must not run past places where regular flagmen are employed and where block signals are used without first getting the clear signal. No other signal shall be the same as the stop signal.

32. Locomotive crews are especially warned of the danger of touching the trolley wires or electric cables in the mine.

33. After delivering empties into an entry motormen shall see that the track is clear before starting out and shall proceed with their trips under full control at all times.

34. All locomotives shall be equipped with rerailers, and the motormen shall be held responsible for them.

35. Switch points shall never be held in position with the hands while a car or cars pass over the switch; if the switch is out of order, the points should be spiked over.

36. No one shall be allowed to ride on top of locomotive or cars.

37. All switches shall be left lined for the straight track.

(E) Roller Men and Scrapers

1. Roller men must have due regards for the hazards their work creates. Be careful not to turn rollers loose on slope or to turn loose rocks while clearing out roller pits or while walking along slope. In taking out old rollers carry them to level place on old roadbed at knuck and do not lay them on the slope.

2. Scrapers must be careful not to roll loose rocks down the slope.

3. Scrapers must inspect roof conditions in their section and report unsafe conditions to the Mine Foreman.

4. Scrapers and roller men must keep safely in the clear of moving trips.

RULES FOR TIMBER AND ROCK MEN

1. When placing timbers workmen must clearly understand what they propose to do. The handling of heavy timbers requires that all men engaged must act in unison, as the failure of one man to do his part may result in several getting hurt.

2. The timberman must see that men in his charge shall be always working under safe conditions. His quarrying bar and other tools must be in safe working condition. While quarrying, other than those engaged in the actual quarrying shall retire to a safe distance. While sledging rock others than those so engaged shall retire to a safe distance or turn their eyes and face from flying "sprawls."

3. When planks or staging have been used care must be taken to turn down or remove all projecting nails or spikes.

4. After timbering up a place, do not leave until removing timber butts or quarried rock, placing them neatly at least three feet in the clear of tracks.

5. Do not reset timbers that are badly damaged by blasting. Always use good sound timbers.

RULES FOR TRACKMEN

1. All track work must be done to conform to Standard specifications.

2. Angle bars must be used on all joints and four-bolted.

3. The trackman is responsible for the safety of the men in his charge and he must see at all times that they are working under safe conditions.

4. The trackman must see that his tools are adequate and in safe condition. Cleavers and spike mauls with burred heads will not be allowed. Spike bars must be sent to the shops regularly for repairs.

5. The trackman must see that his men are properly instructed and that they are careful workmen. New men shall receive particular attention until they become sufficiently experi-

enced. All men on track shall have due regard for their own safety and that of their companions. Care must be taken in handling rails and ties as many accidents have been caused by their careless handling.

6. In all track work due regard must be given to the movement of cars, and other mining operations.

RULES FOR PUMPERS

1. Pumpers shall be governed by general "Electrical" and "Mechanical Shops" rules.

2. Pumpers shall carefully oil and inspect their equipment before starting the pumps. Report any irregularity to the Electrician or Master Mechanic.

3. Pumpers shall examine roof, ribs, and face around pump station and their traveling ways, and report any unsafe condition to the Mine Foreman or Assistant.

4. Pumpers must not go anywhere not called for in their regular line of duty.

RULES FOR MECHANICAL SHOPS

1. The Master Mechanic has charge of shops and all mechanical equipment. He is responsible for the safe working condition of everything under his charge.

2. The Master Mechanic must regularly inspect all mechanical equipment.

3. Hoisting Ropes must be inspected by Master Mechanic or duly authorized Machinist once per day.

4. Machinery must not be worked on before operator has been notified. Disconnect and oil switches, or throttle valves must be tagged "Out."

5. Before going into an engine or compressor cylinder, block the flywheel as an extra precaution.

6. After repairing machinery always replace shields, handrailings, or other safeguards, before leaving the job.

7. Never attempt even slight repairs while machinery is in motion.

8. It is the duty of all operators of machinery to note condition of platforms, hand railings, shields, or other safeguards. If same are not in safe condition, the matter must be reported immediately to the master mechanic.

9. Before doing work where there is danger of coming in contact with electric wires, notify Electrician who will correct any hazard.

10. While on construction or repair work, care must be taken not to pile material so high that it is liable to fall or allow it to lean against walls too weak to bear the pressure. Do not scatter material, tools, or machinery parts around so as to create a hazard causing men to stumble or fall. Leave a clear walkway. Be careful when working above or below other men. Wear safety belt or line while working on high places.

11. Men working around lathes, drill presses, and machines of all kinds must inspect same every day and report any defect immediately to the Master Mcehanic. Do not remove safeguards while machinery is in motion, and do not allow safeguards to be off while machinery is in motion.

12. Men working around lathes, drill presses, engines, crushers, conveyor belts, or any moving machinery, must not wear ragged clothing. They must keep sleeves buttoned up and must keep jumper tucked inside bibb of overalls.

13. Do not ride or stand under any load being carried by crane, chain hoist, ropes, or block and tackle.

14. Before doing any work with emery wheel, lathe, acetylene torch, or anywhere where there is danger of flying material, wear goggles provided for the purpose.

15. No new job is complete unless provided with proper shield, guards, handrails, or other necessary safety devices.

16. Blacksmiths must not allow pieces of hot iron to lie around. Douse in water or place safely out of the way.

17. Keep shops and premises clean. Do not allow trash and inflammable material to accumulate.

(A) Compressor Room

1. Compressor men will be governed by the general "Electrical" and "Mechanical Shops" rules, and other rules herewith pertinent to their work.

(B) Crusher

1. Crusher man must check oil and equipment before starting up.

2. Crusher must not be oiled or started by other than authorized workmen.

3. Repair work on crushers is attended by certain hazards, which must be carefully considered. Use only safe slings, keep workmen in the clear, use care in placing tools, material, or parts so that they will not create a hazard by men stumbling or falling over them, or their falling on men working below.

4. Crusher feeder shall use safety belt provided for the purpose while sledging ore when crusher is in operation.

(C) Hoist Engine Room

1. Hoist House men are governed in particular by the general "Electrical" and "Mechanical Shops" rules, and in general by all other rules embodied herewith pertaining to their work.

2. The hoist engineer must always consider that the safety and lives of other workmen are endangered by the unsafe operation of the hoist. Slope haulage is attended by inherent hazards which can be eliminated by close observance of all safety precautions and close coöperation between hoist engineer and chainers. Do not operate hoist unless it is in safe operating condition but notify Master Mechanic or Electrician as case may be. Examine engine and appurtenances carefully at the beginning of each shift.

3. No one must be allowed in the engine room without authority.

4. No one must handle hoist but those duly authorized.

5. Talking to engineer while hoist is in motion or signals being given is prohibited.

6. Signal horns and bells must be kept in perfect working condition.

7. Hoist engineers must not drink intoxicating liquors. The mere smell of liquor on his breath during work hours will be sufficient grounds for immediate discharge.

(D) Hoisting Signals

1 Bell—Stop if engine is in motion or hoist slowly if engine is not in motion at time signal is given.
2 Bells—Hoist full speed.
3 Bells—Lower full speed.
4 Bells—Hoist slowly.
5 Bells—Lower slowly.
3-3 Bells—"Shake Back" signal.
8 Bells—Emergency or man trip signal. DO NOT MOVE TRIP ON THIS SIGNAL.

1. Signals must be given distinctly. In case of doubt engine must not be moved.

2. On getting "8 Bells" trip must not be moved. The signal is used to stop the trip while loading or unloading man trips, doing work on slope tracks or slope overhead rollers in emergencies, or any other emergency requiring that trip must be kept absolutely still.

3. "8 Bells" followed by "4 Bells" or "5 Bells," indicates man trip and must not be pulled closer than 100 feet to mouth of mine or below the "Hoodlum" Station.

4. To release the trip from an "8 Bell" stop, the "8 Bell" signal must be given followed by proper signal for the desired movement of the trip.

5. In case of any unknown stoppage of trip along slope, chainers must investigate and clear up doubt by the "8 Bells" signal followed by the proper signal for the desired movement of the trip. The engineer must not move trip until the chainers have made the necessary investigations.

6. "3-3" Bell signal is the "Shake Back" signal for speeds midway between man trip speeds and full lowering speeds. It is used for lowering some materials but never explosives. In pulling loads "1 Bell" signal will carry trips at "Shake Back" speed. Chainers must always use "Shake Back" speed while riding trips. They must never ride trips at full speed.

7. "3-3 Bells" shake back signal is given when trip approaches heading from which it is to pick up loads. The engineer will decelerate properly in running into headings.

8. The "2 Bell" and "3 Bell" signals are the regular ore service signals. It is forbidden for anyone to ride trips on these signals.

9. At the beginning of each shift the indicator needle must be checked.

RULES FOR HANDLING MAN TRIPS

1. At the beginning of each shift the trip must be lowered 500 or more feet into the slope and hoisted back before lowering men into the mines. This test is made to remove accumulated water from the engine, brake, and clutch cylinders, and to insure engineer that brakes are in proper working order.

2. No one must get on or off man trips until "8 Bell" signal has been given and permission has been given by man in charge of trip.

3. Man in charge of man trip must inspect cars, couplings, and safety connections before running the man trip. Coupling pins must be equipped with cotter keys.

4. No tools, boxes, or other material must be allowed on man trips, except transit and surveying tools of the mining engineer.

5. After hoisting man trip to the top, the trip must not be lowered until all men are out of the pit mouth.

6. A chainer must ride the front end of all man trips.

7. Hoisting engine drum shall not make over 18 revolutions per minute at No. 1 Mine, or over 20 revolutions per minute at No. 2 Mine.

8. Man trips must never be run on loose drums.

9. Trash, timbers, boxes, or any material must not be carried into or allowed to accumulate around the "Hoodlum Station."

10. No man trip shall run except at designated times without the permission and the authority of the Mine Foreman.

11. Not more than the designated number of men will be allowed on the man cars. Men must be accurately counted onto man trips.

12. Utmost care must be used by all men in getting on and off man trips. No running or pushing will be allowed.

RULES FOR STORAGE AND HANDLING OF EXPLOSIVES IN THE MINES

1. No matches, open lights, inflammable material, carbide, oil, waste, or other than dynamite alone will be allowed in the magazine. The floor of the magazine must be kept clean of loose sawdust, pieces of boxes, paper, or other refuse. This must be kept outside of the magazine and disposed of daily. Do not open dynamite boxes in the magazine. Only the electric battery lamp provided must be carried into the magazine for light.

2. The magazine must be kept locked except when actually issuing explosives.

3. Explosives must be carried into the mines only in the cars provided for the purpose. No one must ride the trip except the chainer and man in charge of trip.

4. Not over 48 hours supply of explosives must be carried into the mine at one time.

5. No powder must be left off at the knucks, but all powder shall be issued from the magazine only.

6. Explosives shall be lowered only at man-trip speed.

RULES FOR HANDLING MATERIAL TRIPS

1. Timbers shall be properly chained and spiked to dummy before coupling onto trip.

2. Rails and pipe shall be lowered on cars and chained to slack couplings. Not more than six 60-pound rails, ten 30-pound rails, six 4-inch pipes, twelve 2-inch pipes, and twenty 1-inch or smaller pipes, shall be carried at one time.

3. Timbers may be carried in at shake back speed but rails and pipe must never be carried faster than man trip speed.

4. A chainer must accompany timber, rail, and pipe trips.

5. Care should be taken that ties, steel, or other material do not project higher than safe clearing distance above the cars.

6. The engineer must be notified by phone when handling material trips.

7. It is occasionally necessary to handle 6-inch, 8-inch, 10-inch, or 12-inch pipe. These shall be chained to trip with all possible care as this is probably the hardest material that is handled. Chainers shall accompany these trips and trip shall move at man-trip speed.

8. Drag engines, small hoists, pumps, motors, and other machinery is occasionally handled. These must be moved under the direction of Master Mechanic or Electrician who will see that all precautions are observed.

RULES FOR UNDERGROUND STABLES

1. All open lights must be kept out of feed-rooms. No smoking is to be allowed.

2. None but authorized persons must be allowed in the stables.

3. The stable must be cleaned daily.

RULES FOR TOPHOUSE AND GENERAL SURFACE WORKMEN

1. Tophouse men, other than cut-off chainer, must not ride on the cars.

2. Tophouse men must be careful at all times for themselves and for their fellow workmen. The tophouse must be kept clean. No boxes, wood, or material must be allowed to lie around on the tophouse.

3. The truck driver must not allow anyone to ride on the running board. None but authorized persons must be allowed on the truck. The truck driver must see that the truck is kept in safe operating condition at all times.

4. Carpenters must be careful to do their work in a safe manner and not create hazards for themselves or for their fellow workmen. Keep all nails turned down or withdrawn. Build scaffolds and even temporary handrailings securely. Do not use unsafe ladders and use care in placing ladders. Use hand lines in passing materials, tools, etc., to and from high places. Be careful while using air-driven tools. Keep air turned off while not in use and do not disconnect hose until you assure yourself that air has been turned off. Do not lay tools around carelessly. Keep tools in safe operating condition.

ELECTRICAL RULES

1. Never clean, inspect, or work on motors until all oil and disconnect switches are opened and tagged "Out" and then such work is to be done only by electrician or persons duly authorized by him.

2. Power house and substation men must handle clearances only for men getting orders for clearances.

3. Serious burns may result from intense arcs. These arcs may cause painful injuries to delicate eye nerves, and burns caused by molten metals are apt to be serious. If exposed to arcs report to Doctor for treatment immediately. In case of burns give First Aid with picric acid gauze or machine oil or greases. Cover with clean cloth; report to Doctor immediately.

4. Never ease a switch in or out but open or close firmly and quickly.

5. Never open disconnect switches under load or open them without first pulling oil switch.

6. When working on electric circuits, motors, etc., always tag oil and disconnect switches "out."

7. Do not handle currents promiscuously and do not get the idea that you are an expert at it. Overconfidence breeds carelessness and accidents are the result.

8. One man alone shall not be allowed on hazardous work but always accompanied by a skilled experienced man.

9. Examine poles, brackets, cross arms, guy wires, anchorages, etc., before doing any pole or line work.

10. When handling wires across traveling ways a guard must be stationed until wires are permanently fastened.

11. Telephone and signal wires must be strung so as to minimize the danger of their coming in contact with wires carrying dangerous voltages.

12. Never depend on insulation of electric wires to protect you against shock.

13. Use one hand at a time if possible when working on electric circuits and keep other hand

behind your back. Shocks from hand to hand are most dangerous.

14. Work only on one wire or bus at a time and finish insulating before starting on the next one. When working back of a switchboard or where one wire or bus is near another see that neighboring parts of opposite polarity are insulated within reach of the tools you are using, or of your body.

15. Never work on any circuit or lightning arrester while there is sign of lightning.

16. The safest course is not to depend upon tracing out a circuit, but rather to test it out with lamp, magneto, voltmeter, or other means.

17. Bare ends of live circuits must be taped even if exposed temporarily.

18. Treat all circuits as if they were alive.

19. To cut off circuits of medium or high voltage before working on them be absolutely sure that circuit is open at every point. Where circuits are controlled from power house or substation the electrician must issue instructions and tag switches out with danger tags. When work is finished and everything is clear the electrician must so notify operator to release clearance. When working on any circuit provided with switch lock the electrician must lock open switch and carry key with him.

20. Bed frames of generators, transformers, motors, and armored cables shall be sufficiently grounded.

21. Pyrene or Foamite fire extinguishers shall be kept at all points designated by the electrician

22. Only non-metallic lamp sockets and plugs shall be used underground. No lamp cord shall be used underground.

TREATMENT FOR ELECTRIC SHOCKS

Hope of restoring the victim of accidental electric shock lies in prompt and continued use of artificial respiration. The reasons for this statement are:

(a) The body continuously depends on an exchange of air as shown by the fact that we must breathe in and out about fifteen times a minute.

(b) If the body is not thus repeatedly supplied with air suffocation occurs.

(c) Persons whose breathing has been stopped by electric shocks have been reported restored after artificial respiration has been continued for approximately two hours. The Schaefer or "Prone Pressure" method of artificial respiration is illustrated and described in the following resuscitation rules. The advantages of this method are:

(a) Easy performance; little muscular exertion is required.

(b) Larger ventilation of the lungs than by the supine method.

(c) Simplicity; the operator makes no complex motions and readily learns the method on first trial.

(d) No trouble from the tongue falling back into the air passage.

(e) No list of injuries to the liver or ribs if the method is executed with proper care.

Aid can be rendered best by one who has studied the rules and has learned them by practice on a volunteer subject.

INSTRUCTIONS FOR RESUSCITATION

(Follow these instructions even if victim appears dead.)

I. BREAK THE CIRCUIT IMMEDIATELY.

1. With a single quick motion separate the victim from the live conductor. In so doing avoid receiving a shock yourself. Many have by their carelessness received injuries in trying to disconnect victim of shock from live conductors.

OBSERVE THE FOLLOWING PRECAUTIONS:

(a) Use a dry coat, a dry rope, a dry stick or board, or any other dry nonconductor to move either the victim or the wire, so as to break the electrical contact. Beware of using metal or any moist material. The victim's loose clothing, if dry, may be used to pull him away; do not touch the soles or heels of his shoes while he remains in contact—the nails are dangerous.

(b) If the body must be touched by your hands, be sure to cover them with rubber gloves, rubber sheeting, or dry cloth; or stand on a dry board or on some other dry insulating surface. If possible, use only one hand.

If the victim is conducting the current to ground, and is convulsively clutching the live conductor, it may be easier to shut off the current by lifting him than by leaving him on the ground and trying to break his grasp.

2. Open the nearest switch, if that is the quickest way to break the circuit.

3. If necessary to cut a live wire, use an ax or hatchet with a dry wooden handle, or properly insulated pliers.

II. SEND FOR THE NEAREST DOCTOR.

1. This should be done without a moment's delay, as soon as the accident occurs, and while the victim is being moved from the conductor.

III. ATTEND INSTANTLY TO VICTIM'S BREATHING.

1. As soon as the victim is clear of the live conductor, quickly feel with your finger in his mouth and throat and remove any foreign body (tobacco, false teeth, etc.). Then begin artificial respiration at once. Do not stop to loosen the patient's clothing; every moment of delay is serious.

2. Lay the subject on his belly, with arms extended as straight forward as possible, and with face to one side, so that nose and mouth are free for breathing. Let an assistant draw forward the subject's tongue. If possible, avoid so laying the subject that any burned places are pressed upon. Do not permit bystanders to crowd about and shut off fresh air.

3. Kneel straddling the subject's thighs and facing his head; put palms of your hands on the muscles of the small of the back, with thumbs nearly touching each other, and with fingers spread over the lowest ribs.

4. With arms held straight, swing forward slowly, so that the weight of your body is gradually brought to bear upon the subject. This operation, which should take from two to three seconds, must not be violent—internal organs may be injured. The lower part of the chest and also the abdomen are thus compressed, and air is forced out of the lungs.

5. Now immediately swing backward, so as to remove the pressure, but leave your hands in place, thus returning to the position first assumed. Through their elasticity, the chest walls expand and the lungs are thus supplied with fresh air.

6. After two seconds swing forward again. Thus repeat deliberately twelve to fifteen times

a minute the double movement of compression and release—a complete respiration in four or five seconds. If a watch or clock is not visible, follow the natural rate of your own deep breathing—swing forward with each expiration, and backward with each inspiration. While this is being done, an assistant should loosen any tight clothing about the subject's neck, chest or waist.

7. Continue artificial respiration (if necessary, two hours or longer), without interruption, until natural breathing is restored or until a physician arrives. Even after natural breathing begins carefully watch that it continues. If it stops, start artificial respiration again. During the period of operation, keep the subject warm by applying a proper covering and by laying beside his body bottles or rubber bags filled with warm (not hot) water. The attention to keeping the subject warm should be by an assistant or assistants.

8. Do not give any liquids whatever by mouth until the subject is fully conscious.

RULES FOR MINING ENGINEERS

1. The Mining Engineer must see the workings conform with specifications.

2. The Mining Engineer must notify Mine Foreman when workings approach property line barrier pillar and when adjacent workings closely approach each other so that proper precautions may be observed.

3. The Mining Engineer must not go into abandoned or idle workings unless accompanied by Mine Foreman, Assistant or competent miner authorized by Mine Foreman or Assistant.

4. The work of the Mining Engineer carries him to all parts of the mines and he must always assure himself that conditions are safe before

prosecuting his work. Any unsafe condition should be reported immediately to the Mine Foreman or Assistant for correction.

RULES GOVERNING ACCIDENTS

1. All accidents, no matter how slight, must be reported. The injured must in all cases report to the company doctor for treatment. First aid treatment must not be considered sufficient until so ruled by the company doctor.

2. Stretchers and blankets and first aid equipment must be kept at designated places. Anyone caught tampering with this equipment will be immediately discharged.

3. Every accident shall be investigated by the Accident Investigating Committee.

4. Injury caused by violation of rules will be severely penalized. Violation of rules causing injury to others will probably result in discharge of persons violating rules.

PENALTIES

The penalty for violation of any rule shall fit the case.

When in doubt as to the meaning of a rule, or the sufficiency of a proposed protection, consult Superintendent or Foreman.

The Superintendent and Foremen invite suggestions and will consider the reporting of rule violations as the index of a safe man.

No._____.

I have received a copy of "Safety Rules" covering Operations of Ore Mines bearing number as above.

I will read these rules and agree to follow them as long as I am employed in or about the Ore Mines of the Sloss-Sheffield Steel & Iron Co.

(Signed)_____

(Witness)_____

(Date)_____ 19____

4466 DEFENDANTS' EXHIBIT No. 21.

Republic Steel Corporation.

Report of Earnings for Income Tax Purpose and Receipt for F. O. A. B. Tax Deductions.

Employee's Name	Social Security No.	Period Covered
503 John Butler	.....	
	418-01-8101	1940

The first $3000 of earnings is taxable for Federal Old Age Benefits.	Earnings to be Reported for Income Tax	F. O. A. B. Tax
	$2,979.63	$18.40

The amount shown above represents your earnings from this corporation for the period shown. This is also your receipt for the Federal Old Age Benefits Tax, which has been paid by you.

4467 DEFENDANTS' EXHIBIT No. 22.

Republic Steel Corporation.

Report of Earnings and Receipt for F. O. A. B. Deductions.

Employee's Name	Social Security No.	Period Covered
503 John Butler	418-01-8101	1939

Earnings to be Reported for Income Tax	F. O. A. B. Tax
$2873.17	$16.54

Report of Earnings for Income Tax Purpose and Receipt for F. O. A. B. Tax Deductions.

The amount shown above represents your earnings from this corporation for the period shown. This is also your receipt for the Federal Old Age Benefits Tax, which has been paid by you.

4553
RULES
for
The Prevention of Accidents

ORE MINES
and
QUARRIES DIVISION
BIRMINGHAM DISTRICT

REPUBLIC STEEL
CORPORATION

Foreword

The Republic Steel Corporation has established Rules and Regulations to be read, understood, and enforced in order that its employees shall work under the safest possible conditions.

Safety Rules, Safety Inspectors and Safety Appliances are worthless without the co-operation of the employees.

A man's efficiency will, in some measure, be judged by his knowledge of the rules and the discipline he maintains.

The carelessness of an employee is very apt to result in danger not only to himself, but to other employees, and on this account the Company desires a careful observance of these rules by every employee. This is a direct order to Superintendents and Foremen, and an earnest appeal to each and every workman, and is of such importance that they will hereafter be known as a part of the duty of each employee, and a violation of them will subject the offender to discipline, while persistent violation will lead to his discharge. The method of discipline at the various works will be determined by the local management, and while it is not expected that severe measures will be adopted for minor infrac-

tions of the rules, EVERY VIOLATION, no matter how slight should be noted and steps taken to prevent a repetition. It is only by constant effort that a high standard of safety can be maintained.

If you see men breaking the rules and endangering their lives and the lives of other men, you should report them to the proper authority. This is necessary for the protection of yourself and others. If you know of machinery that is out of order, or a dangerous place that is not protected, you will assist your employer, and possibly save injury to yourself or to a fellow-employee, by reporting the same immediately.

In order that the efforts of the Company may be effective, it must have the co-operation of its employees, and realizing that this can be more fully secured through some systematic method, this book of Safety Rules and Regulations has been published.

Always act in a manner which will insure the greatest safety to yourself and those working around you.

REPUBLIC STEEL CORPORATION

November 1, 1935.

GS-42—3M-11-35

GENERAL CONDUCT

of

EMPLOYEES

1. Fighting, wrestling, scuffling or "fooling" of any sort is absolutely prohibited and anyone so engaged is subject to discharge.

2. Loitering, either underground or on surface, and visiting places where other men are employed will not be permitted, except by order of the Foreman to perform an errand, carry a message or some such purpose.

3. The use of intoxicating liquors during working hours is absolutely prohibited. Drunkenness while on duty will result in immediate discharge. Habitual drunkenness when off duty lessens a man's usefulness and will be sufficient ground for his discharge.

4. Employees should not crowd into skips either on the surface or underground, and should not run, push or crowd while getting into the skip at any time. (NOT MORE THAN THIRTY MEN WILL BE ALLOWED AT ONE TIME IN A SKIP). Do not attempt to leave or enter the skip until it comes to a full stop.

5. No material or tools shall be carried in skip while hoisting or lowering men.

6. Do not indulge in any un-safe practice or permit your fellow workman to do un-safe acts.

7. Attend all Safety Meetings and report all unsafe conditions as soon as you discover them.

8. Learn how to administer Artifical Respiration as shown in this Rule Book and prac-

tice it on your fellow workman. Don't wait for an accident — learn how to revive your partner by practicing on him and let him practice on you.

9. All general and local safety orders must be complied with. These orders are issued in writing, printed and posted, covering special hazards. Your Foreman has copies of these orders.

10. A Safety Inspector is provided for reporting un-safe conditions and your co-operation with him is solicited.

SURFACE

1. All roadways about the mine must at all times be kept safe for travel of employees and others.

2. The sides of stairs, trestles, tipples, platforms and other hazardous walkways in and around the mines and buildings shall be provided with hand and guard rails. Toe boards shall be placed where roads or other passageways are crossed, etc., and the floors close-boarded.

3. In all mine buildings, provisions must be made for the safety of men from accidents due to floor openings, stairways, etc.

4. Loose boards covering ditches, holes, or openings in floors, or walks, or overhead in buildings, or trestles, staging, or on tipple shall be repaired at once.

5. All material, when possible, shall be piled and maintained at least eight feet from the rail of standard gauge tracks.

6. When a workman removes the cover from any opening in the floor, ground, valve pit or sewer, he must take such steps as are necessary to guard that opening so that no one will fall into it.

7. In new construction or repairs, the premises shall be kept as clean and orderly as possible. Boards with nails sticking up must not be left lying around.

8. Care must be taken in loading material on cars so that no portion will project over the sides or fall off in transit. See that the weight of the load is properly distributed on car, and that large pieces are braced to prevent shifting.

9. Do not pile material so high that it will fall over, or allow it to lean against walls too weak to bear the pressure.

10. Never use a cutting tool on which you have to use a hammer or sledge if the head is burred or so hard that small pieces break off of it when hit.

11. Every employees whose duties require him to work with an appliance of any kind must carefully examine before use and make sure that it is in good condition. Report any defects to the foreman.

12. Failure on the part of an employee to observe any of the rules contained in the safety regulations, or to use safety devices when furnished, will occasion a reprimand from the Foreman and a second offense will be sufficient ground for discharge.

BOILER HOUSES

1. When cleaning or repairing boilers, see that all valves are tightly closed, and danger signal placed, also see that boiler is properly cooled before entering.

2. Never go into a boiler before you have closed all valves and attached a "Danger—Do Not Move" sign.

3. Never open a valve when such a sign is attached until you have seen that no one is in the boiler.

4. An inexperienced man must not be allowed to turn steam into a cold line, unless accompanied by the Foreman.

5. Emergency feed water appliances must be tried each day to determine that they are in good working order.

6. No employee or other person shall be allowed in the boiler house, except those having work there.

7. On coming on shift it shall be the duty of the fireman to blow down the water colmun, noting the return of water in the glass and test gauge cocks, until absolutely sure of water level. This must be done at the beginning and close of each shift.

8. When steam gauges vary more than five pounds they must be tested and corrected.

9. Boilers must be examined daily for leaks, at every possible point.

10. Dampers must not be closed entirely when there is fire on the grates, as gas may collect and result in an explosion.

11. Injectors, feed pumps and all other appliances must be kept in good working order.

ENGINE HOUSES

The prevention of accidents to operators or employees is of first importance, and no engineer must allow a condition dangerous to life or limb to exist without remedying same, if possible. If machinery, engines, piping or valves are in any way dangerous and cannot be fixed at once, report this fact to the Master Mechanic or Superintendent, or both, at the earliest opportunity.

Signal Code

1. Signals must be kept in efficient working condition and boards posted in the engine room and at all signal stations, giving the following signals:

1 Ring ..... Stop

2 Rings ..... Hoist

3 Rings ..... Lower

4 Rings ..... Hoist Slowly

On a signal of 4 Rings stop skip at mouth of slope until re-signalled.

5 Rings ..... Lower Slowly

8 Rings ..... Working Signal

For scrapping slope, carrying rails, timber, etc. When this signal is given move skip only on 4 or 5 ring signals, until 8 Rings are repeated showing work to be completed.

2. At the beginning of every shift the empty skip must be lowered and hoisted to be sure slope track is clear. The running of this "safety drag" must be rigidly adhered to.

3. At the beginning of every shift, engineers should examine all machinery and hoisting cables in the engine house, and should report any defect to the Master Mechanic.

4. Movable parts of engines or other machinery should not be oiled when in motion, except where necessary, and then great care should be used.

5. The hoisting engineer shall see that all guards are properly placed and engine in proper working condition on going on his shift.

6. The hoisting engineer shall familiarize himself with the use of the signal code for hoisting and lowering, and a copy of this code must be placed in the engine house.

7. If bells are not in satisfactory working order, proper persons must be notified immediately.

8. If at any time the engineer is not sure of the signal, he must wait until the same is repeated before moving the machinery.

9. The engineer shall not allow any persons in the engine house whose duties do not require their presence therein, unless they are visitors authorized by the superintendent.

10. There must always be a second man on hoist platform, competent to operate hoist, when men are being hoisted or lowered.

11. The engineer must not hold conversations with any one while his engine is in motion or while signals are being given.

SHOPS

1. Safety devices for protection shall be used in every place possible. Foreman and workmen in charge of work should use every effort to train their workmen to guard against dangers connected with their work.

2. Men working on lathes, emery wheels, drill presses, and machinery of all kinds must inspect same every day before starting work, and report any defects immediately to the Master Mechanic.

3. All tools such as cold chisels, cold sets, fullers, hammers, sledges, drills, etc., must be kept dressed. No tools with mushroomed heads shall be used.

4. When operating emery wheels or grind stones or doing work dangerous to the eyes, mask shields or proper eye protection must be used.

5. Men working about engines, motors, shafting, or other machine must wear close fitting clothing. Loose fitting clothing such as sleeves, gloves, overalls, jackets or handkerchiefs must be prohibited. Clothes must never be changed or stored near moving machinery.

6. Scuffling and wrestling or other like carelessness near machinery or at any location is prohibited and those guilty are subject to dismissal.

7. Workmen must never walk between belts, shafts or in narrow places between moving machinery. If repairs necessitate a man going into such places the machinery must be stopped and greatest precaution possible taken to guard against starting machinery before work is completed.

8. No person should ever try to oil, clean, polish or repair machinery except when it is his particular work, and then he should stop machinery. Power must be shut off and safety lock attached on switch or control where power is turned on. It is the duty of an oiler to know the condition of his ladders, stairways, walks, platforms, and railings, and if they are not in proper condition to report the same to his foreman.

9. After machinery is repaired all tools or loose materials must be removed and safety guards replaced before leaving the job.

10. Cog-wheels, gears, and frictions of all kinds should be kept properly covered, unless otherwise protected, so that a man cannot possibly get caught in them.

11. Material left in shops should be piled in such a manner that it cannot fall or be knocked over. Tools, machine parts or other material should not be placed where they may be knocked or jarred into moving machinery.

12. No person shall be allowed to handle tools or operate machinery with which he is not familiar.

13. There must be one person designated by the shop foreman to oil and have charge of shop engine.

14. The use of a wabbly circular saw is prohibited.

15. No person must attempt to plane a piece shorter than two feet on the jointer.

16. Every precaution must be used to prevent condensation in steam hammer.

17. No person must be allowed to place his hands between the dies of a steam hammer. Small pieces of material must be handled with tongs.

18. In cutting material with power shears, a workman must never be allowed to handle a piece shorter than twelve inches, except with tongs.

19. When you complete a job, NEVER leave tools or material lying overhead. Tear down all temporary scaffolds as soon as you are through with them. Do not allow boards with nails sticking up to lie around anywhere.

20. After repairing machinery, always replace safeguards before leaving the job.

21. Before doing any work where there is danger of coming into contact with electric wires, notify the Electrician, who will advise concerning the work.

22. Shops must be cleared daily of shavings and rubbish.

23. No employee or other persons should be allowed in the shops except on business.

24. Wherever possible, machinery with belt drive must be equipped with belt shifters, which must be used at all times by machine operators.

ELECTRICAL EQUIPMENT

1. No person except the Electrician or workman duly authorized by him must attempt to repair or adjust electrical machinery or equipment.

2. The Electrician or duly authorized person shall order a circuit cut out, and this circuit shall only be closed and put in service again by the same Electrician.

3. When men are working on a line and power has been cut off, a sign so stating must be placed on the switch and the switch locked

out, and power must not again be turned on nor sign removed except by the same person.

4. Do not close a switch unless you know why it was opened.

5. Live wires must not be allowed any place where anyone is liable to come in contact with them.

6. No one but those properly authorized shall be allowed to open or close an electric switch.

7. Electricians shall not handle electric wires while standing or sitting in a wet place without extra precaution to obtain insulation from the ground.

8. In handling any circuit power should be cut off and safety locks used to prevent the power being turned on while someone is working on the line.

9. So far as possible all circuits should be treated as though they were live, even though they are believed to be dead.

10. Electricians should not depend on insulated or taped handles of their tools, and motormen and electricians are advised to wear electrician's safety shoes and gloves.

11. Linemen and other workers must wear safety belts when working overhead.

12. Do not handle circuits promiscuously and do not get the idea that you are expert at it. OVER-CONFIDENCE BREEDS CARELESSNESS, AND ACCIDENTS ARE THE RESULT. Competent men are cautious; only unskilled and inexperienced men take chances.

13. No temporary work shall be done unless it is good and safe enough, mechanically and electrically, to be permanent.

14. It is possible for telephone or signal wires in crossing high tension wires to become charged to such an extent that they are dangerous. Such crossing points must be carefully insulated against contact.

15. Persons working with electricity must be careful, cautious and on the alert at all times. DO NOT TAKE CHANCES. Comply with all general and local safety orders issued.

FIRE PROTECTION

1. Fire signals shall consist of a continuous blast from the siren at compressor house.

2. Fire hydrants, fire pumps and valves must be tried at least once a month, and kept in working order at all times.

3. Fire valves, hydrants, and exposed piping for fire fighting purposes must be painted red. Fire extinguishers and fire pails must be in place ready for immediate use.

4. Signs—"No Smoking" must be placed wherever there is danger of fire.

5. Smoking must be absolutely prohibited in barns, oil storage houses, magazines and carpenter shops.

6. Every employee is a member of the fire department and should consider himself a committee of one to guard against fire.

7. All iron smoke stacks in passing through roof or side of building must have eighteen (18) inches of clearance all around.

8. Steam or hot water pipes is passing through walls, ceilings, roofs, partitions and floors of wood must have at least three-quarters (¾) inch clearance all around.

9. Where electrical equipment is installed, carbon tetrachloride extinguishers must be provided. Do not use soda-acid extinguishers on electrical fires.

10. Matches must be stored in tin boxes.

11. Inflammable or explosive materials must not be allowed to accumulate in or around any buildings.

12. All sheaves and turn sheaves must be guarded in an approved manner, and suitable ladders, stairways and guarded platforms provided to make same accessable for oiling and repairs.

13. The Fire Prevention Inspector's recommendations should be carried out and housekeeping items cleaned up promptly.

RULES FOR MINE FOREMAN

1. The Mine Foreman must report to the Superintendent and take orders from him.

2. The Mine Foreman has direct supervision over all regular inside employees.

3. The Mine Foreman and his assistants direct the working forces of the mines, maintain proper discipline, inspect and see that all workmen and working places conform to the safety policy of the Company.

4. The Mine Foreman must be continually alert to detect unsafe workmen, unsafe conditions and unsafe practices.

5. The Mine Foreman must personally investigate immediately every case of personal injury and make a report to the Superintendent. He must take steps to prevent a recurrence of such accidents.

6. The Mine Foreman must treat all em-

ployees with courtesy, be open to safety and other suggestions, investigate complaints and reports of conditions and take proper action as necessary.

7. The Mine Foreman shall travel the slopes once a week to inspect track, loose rock in ribs and roof, and see that slope is kept clean.

8. The Mine Foreman must see that all new men are thoroughly instructed in their duties and must properly instruct them regarding safety.

9. The Mine Foreman must see the workmen are supplied with proper and safe tools and appliances.

10. In case the Mine Foreman suspects that any workman is the victim of any disease affecting the physical welfare of the workmen or whereby such disease would render the workman liable to particular hazard from even slight injuries, such workman must be sent to the Company Doctor and not allowed to return to work until the Doctor so releases him.

11. Foremen should review all existing general and local safety orders periodically with the workmen, and see that all new safety orders are posted on bulletin boards where all workmen can see them.

RULES FOR MEN ON ORE

(A) CONTRACTORS AND DRAG FOREMEN

1. Every contractor and drag foreman is responsible for the safety of the men working under him and must see that they observe the rules of the mine.

2. No contractor or drag foreman, except in case of sickness, must lay off without per-

mission of the Mine Foreman, and no working place shall be allowed to operate without a competent and experienced miner in charge.

3. Contractors and drag foreman or experienced miner approved by Mine Foreman, must personally examine and test, with hammer and bar, roof, ribs and face of working place and see that all loose and dangerous material be quarried down. If the place cannot be made safe, stop work and call for the Mine Foreman or assistant. Any unusual condition must be reported to the Mine Foreman or assistant.

4. When timbers have been blasted out or fallen from under dangerous roof, men must not return to work until the timbers have been set or the place otherwise made safe.

5. All contractors and drag foremen must work in accordance with instructions of the Mine Foreman or assistant.

6. No contractor or drag foreman shall interfere with the chainer about his turn. Any irregularity must be handled with the Mine Foreman or assistant.

7. The contractor and drag foreman must see that all tools and working appliances are in safe operating condition and see that the Company tools and equipment are not abused.

8. Contractor and drag foreman must pay particular attention to the instruction and care of new men.

9. Contractors and drag foremen must see that all tools and appliances are removed to a safe place at the end of each shift and before blasting is done.

10. Contractors and drag foremen must immediately investigate and obtain all facts in

reference to any accident occurring in his heading or slope and take proper steps to prevent a recurrence of such accidents.

11. Contractors and drag foremen must watch out for old "guns" and failed holes. They must see that drill men are properly instructed and competent to avoid hazards inherent in their work. Failed holes must be reported to Mine Foreman or assistants for instructions.

12. Contractors and drag foremen must keep their places clean. Do not allow ordinary heading debris to be scattered around in aimless fashion; cleanliness promotes safety.

13. Contractors and drag foremen must drive their places according to specifications and to engineer's lines and grades.

14. Goggles must be worn when "collaring" hole or breaking rock.

(B) DRILL MEN

1. The drill men work under the instructions of the contractors or drag foremen or experienced miner properly approved by the Mine Foreman or assistant.

2. The drill men must personally examine the roof, ribs, and face of his working place by means of hammer or quarrying bar and keep all loose roof quarried down. The place must be continually inspected during the shift and kept safe at all times.

3. Drill men, before setting up, must examine the face for old "guns" which may contain unexploded dynamite and for failed holes.

4. The drill men must see that all his tools and equipment are in safe working condition.

5. The drill men must see that all tools and equipment are moved to a safe place at the end of each shift and before any blasting is done.

6. The drill men must immediately report to contractor, drag foremen or assistant any unusual or unsafe conditions, such as failed holes.

7. Goggles must be worn when collaring hole, or breaking rock.

(C) DRAG ENGINEERS

1. The drag engineer works directly under the supervision of the drag foremen and indirectly under the Electrician and Master Mechanic

2. At the beginning of the shift the drag engineer must see that the equipment is in safe working condition, must oil all bearings and make possible slight repairs and adjustments before throwing in main switch.

3. In case of accident or trouble to electrical apparatus call for the electrician.

4. In case of accident or trouble to mechanical apparatus call for the machinist.

5. The motor must be safely anchored down after each move.

6. The drag engineer must not move engine without a clearly understood signal and then only when chute men are in the clear.

7. On leaving machine at end of shift, leave switch out, controller in neutral, ropes in clear of track, and open main switch.

8. To renew fuses, always open main switch. No fuse other than those provided for the purpose shall be used.

9. Engines must be kept clean.

(D) MINERS AND MUCKERS

1. Miners and muckers shall work under direct supervision of contractors and drag foremen.

2. Miners and muckers must use due diligence in their work and be careful at all times for their own safety and that of their fellow workmen.

3. While the contractor and drag foremen must see that places are in safe working condition, this relieves the miner of no responsibility in this connection. He must know for himself that conditions are safe.

4. Care must be taken in handling of ore. Do not attempt to load too big a piece of ore by hand, as such may cause strain or rupture. Do not attempt to load rocks of "two men" size but sledge the rocks to "one man size." Miners must be careful and not undermine ore or rock pile while loading. The muck pile must be kept trimmed down to prevent rocks rolling on hands or feet.

5. While sledging rock notify your companions that they may turn their backs or get to safe distance from flying 'spawls." Goggles must be worn by the person breaking such rock.

6. Special care must be used in holding cars to the face while loading. It is strictly against

the rules to chock cars with rocks. Use the safety sprags. A "dead man" shall be kept on down grade side of car at all times.

7. On drag work the face man must keep the face surroundings well quarried at all times.

8. The face man must keep in the clear of the dipper, ropes, skidder block and hangers at all times.

9. In drilling hanger holes drill them only in secure ground.

10. Never attempt to tighten hanger wedges or "change over" without first having a clearly understood signal from the drag engineer that the engine will not move.

11. In turning dipper over do not hold rope with hand or foot but fasten rope properly and get in the clear.

12. The "chute men" on drag work must use care in the handling and trimming of cars and have due regards for the safety of companions. Use safety sprags and safety chocks provided for holding cars.

13. Chute men must not go between engine and cars, cars and ramp, or engine and ramp while engine is in motion.

RULES FOR HANDLING AND USE OF EXPLOSIVES

1. Explosives will be issued from the underground magazine at designated time only.

2. Not more than one day's supply of explosives will be issued at one time.

3. Don't forget the nature of explosives. Only by sensible treatment can they be handled safely.

4. Don't smoke while handling explosives and don't handle explosives so near a light that there is danger from the flame or sparks.

5. Don't have a lighted lamp on your hat or stuck in a timber over the place where you are preparing charges.

6. Don't throw or allow packages of explosives to fall violently.

7. Caps shall be carried and kept only in the containers provided for the purpose.

8. Don't crimp a cap with your teeth. Use a cap crimper. Be sure that fuse is cut squarely across with a sharp knife and push gently against the fulminate and crimp securely. In wet places smear soap between joint of fuse with cap.

9. Don't leave dynamite fuse or caps in a wet place.

10. Do not use fuse less than seven (7) feet in length. However, for blockholding or popping rocks, fuse four feet in length may be used with permission of Mine Foreman.

11. Don't force a stick of powder with cap and fuse attached into a hole.

12. Use only wooden tamping poles.

13. Don't fire a charge to shake a hole and then immediately reload it, as the hole will be hot.

14. Do not shoot except at times designated as "shooting time." If you have rocks to "pop" obtain permission of Mine Foreman or assistant to shoot between "shooting times."

15. Don't fire a shot until everyone is out of danger. In special cases such as rock falls, shooting down dangerous rocks, etc., men must be placed at all approaches to guard against anyone being endangered by the necessary blasting.

16. Don't remove dynamite from original cartridge when loading holes.

17. In loading holes, don't separate dynamite cartridge by dummies. This would leave unexploded power in the bottom of the holes.

18. Don't use frozen or chilled dynamite.

19. Don't attempt to thaw dynamite. It will be thawed by underground temperature and issued only when thawed.

20. The following is the proper method for making up primers: Punch a hole about the size of a lead pencil in side of cartridges, this hole to be a little deeper than the length of the blasting cap. Aim to keep the blasting cap in the center of the cartridge. Insert the blasting cap and fasten the fuse securely to the dynamite cartridge with a string to prevent the cap and fuse being pulled out of the cartridge. Do not loop the fuse around the cartridge, as this may break the fuse and cause a misfire.

21. Not more than seven holes must be lit by one man, and two men should always be present while lighting a round. It is advisable for men lighting holes to have two car-

bide lights in case one should go out. The "sparkler" on both lamps should be in perfect working condition.

22. Any surplus powder must be returned to powder magazine.

23. Use wooden wedges and wooden mallets in opening powder boxes.

24. All holes must be "blown" out with appliance provided for the purpose before changing holes.

25. All failed holes, misfires or holes containing unexploded powder must be reported immediately to the Mine Foreman, and no work prosecuted in the working place until the Mine Foreman has ruled on procedure for handling.

26. It is strictly forbidden to drill into or through old "guns."

GENERAL MINING RULES

1. At all times special care must be given to quarrying, particularly so after blasting. Every place must be provided with a quarrying bar and a slate bar and kept in good condition.

2. When a heading, slope or upset is about to hole through, men must be stationed at a safe place to warn anyone approaching that point until blasting has been completed. This rule must be complied with whether place is holing through to active workings or not.

3. In case of misfires, these must be reported to the Mine Foreman or assistant, to the opposite shift leader if in double shift places, and to men working in contiguous places.

4. No one should enter any working place unless men are at work in the place. If no one is working he must be positive that no blasting is being done. No one should enter an idle or an abandoned place alone.

5. Miners must not drill holes into the roof, as blasting such holes causes the roof to become dangerous.

6. All gob piles must be kept three feet from track.

7. Drillman or others using air must see that air is turned off before disconnecting hose.

8. Old timbers and ties must not accumulate in piles. Scatter the pieces out singly until such time that they can be hauled to the surface.

9. Anyone caught sleeping on the job will be subject to discharge.

10. No one must cross over hoist rope while it is in motion. All men are required to travel manways where possible.

11. Building of fires underground is absolutely forbidden, except in forges or furnaces provided for that purpose.

12. Derailers must be kept in position to wreck cars at all times except when cars are passing.

13. Loafing or loitering on slopes is forbidden. Keep to the manways. If necessary to cross slope to "hoodlum" station, exercise proper care in ascertaining where the trip is.

14. Trash and inflammable material must not be allowed to accumulate.

15. Workmen should give particular attention to the condition of their clothing. Loose, ill-fitting and ragged clothing must not be worn. The use of safety shoes and hard-boiled hats is encouraged.

16. Riding of loaded or fast empty trips is forbidden and will result in immediate discharge.

17. Riding of empty trips is forbidden unless duly authorized by Mine Foreman or assistant and then only on man trip signal.

18. No miner, except in case of sickness, must lay off without permission of his Foreman, and no working place shall be allowed to operate without a competent and experienced miner in charge.

RULES FOR MEN ON HAULAGE

(A) CHAINERS

1. The position of a chainer being one of peculiar hazard, he must use special care and precaution to avoid danger incident thereto.

2. After signalling the hoisting engineer do not leave signal wires until the trip has moved in the desired direction.

3. Signals must not be given by any person other than those duly authorized.

4. "Fancy" or "trick" riding will not be allowed. Men must not ride on brake shoes.

5. If a trip has been stopped, a signal must not be given to move trip until it is ascertained why the trip has stopped.

6. Chainers must see that all trips have couplings properly made. Do not leave

"knuck" with twisted couplings. Keep an eye out for defective couplings and defective ropes. Defective couplings should be collected and sent to the surface. In case of a defective rope stop the trip and notify Mine Foreman and Master Mechanic immediately.

7. Chainers must not allow anyone to ride loaded trips. Should anyone attempt to "steal" a ride, stop the chain and notify the Mine Foreman or assistant immediately.

8. Chainers must not set a "kick" rail while trip is in motion.

9. Chainers must give signals according to Standard Hoisting Signals. No special or doubtful signal will be honored by the engineer. Should such signal be given while trip is in motion the hoist engineer will stop trip and be governed by the eight bell rule.

10. Chainers must wear their jumpers inside the bib of their overalls. They must not wear loose or ragged clothes or worn out shoes.

11. Hooks provided for that purpose must be used in uncoupling cars.

(B) RULES FOR MOTORMEN

1. Due to the hazards of this occupation especial care must be taken at all times. Motormen must not back up on trolley poles unless absolutely necessary. Locomotives must not be left standing without brakes set up, brake wheel spragged, controller in neutral position and trolley pole and reel hook free from trolley wire. Locomotives must always be left in a safe, dry place. In no case must locomotives be worked on while trolley pole or reel hook is in contact with trolley wire. Motormen must be sure that loaded or empty cars are not left standing unless properly

chocked. Not more than two men must be allowed to ride on a locomotive at any time except in case of emergency and then only with permission of Mine Foreman or his assistants. "Running switches" are absolutely prohibited. Trolley poles must not be turned while locomotives are in motion. Motors must not be reversed while locomotives are in motion. In no case must anyone move locomotive unless he is in his proper place on the locomotive.

(C) TRIP RIDERS

1. Trip riders must wait until cars and locomotives have come to a dead stop before coupling. Cars must not be left standing without being chocked with wooden chocks. "Dead men" must be placed where necessary. Derails must be closed at all times except when trips are passing. Trip riders must ride end of locomotives opposite to motormen. Hooks provided for that purpose must be used in uncoupling cars.

(D) TRAMMERS

1. All places must be provided with sufficient and safe brake sticks. Before loading cars, the miner must assure himself that brake sticks and brakes are in good condition and if not the car or cars must not be trammed. Brake sticks should be swapped out when worn or defective.

2. A car must not be allowed to leave face until preceeding car or cars have had sufficient time to reach knuck.

3. No one must ride on empty car except trammer.

4. No one must ride on loaded car except trammer. In case a new man is being broken in he will be permitted to ride while learning to tram.

5. Except in case of emergency the cars must be kept under control and stopped with brake stick, and not by using safety sprag.

6. While tramming the cars must be kept under control.

7. Under no circumstance must cars be "chocked" with rock. Use safety sprags or, where authorized, safety wooden chocks.

8. Not more than one car shall be trammed at one time.

9. Care should be taken in knucking cars properly and seeing that all couplings are properly made.

(E) INSIDE HOIST ENGINEERS

1. The same rules applying to surface hoist engineers shall apply underground.

2. The Standard Hoisting Signals shall govern. Do not accept signals by lamp or whistling, as chainers must be governed by the Standard Hoisting Signals. Because your engine may be in an out of the way place is no reason why there should be any laxity in the observance of rules.

3. Examine condition of roof and ribs at beginning of each shift and report any unsafe condition to the Mine Foreman or assistant. Do not work until condition is corrected.

RULES FOR TIMBER AND ROCK MEN

1. When placing timbers workmen must clearly understand what they propose to do. The handling of heavy timbers requires that all men engaged must act in unison, as the failure of one man to do his part may result in several getting hurt.

2. The timberman must see that men in his charge shall be always working under safe conditions. His quarrying bar and other tools must be in safe working condition. While quarrying, other than those engaged in the actual quarrying shall retire to a safe distance. While sledging rock others than those so engaged shall retire to a safe distance or turn their eyes and face from flying "spawls." Goggles must be worn by sledger.

3. When planks or staging have been used care must be taken to turn down or remove all projecting nails or spikes.

4. Blasting shall be done only under direction of Mine Foreman or assistant.

5. After timbering up a place, do not leave until removing timber butts or quarried rock, placing neatly at least three feet in the clear of tracks.

6. When the roof rock in a place is working or the top is particularly bad the Mine Foreman or assistant must be present to direct timbering or the blasting down of unsafe roof.

7. Do not reset timbers that are badly damaged by blasting. Always use good sound timbers. The timbers are "culled" on the surface, but occasionally one may get by, in which case it is not to be used.

RULES FOR TRACKMEN

1. All track work must be done according to the Mining Engineer's specifications, and using only standard track equipment provided. If ribs or grades are not to proper line consult with Mine Foreman or assistant who will handle for correction.

2. On all new work the rails shall not be closer than three (3) feet to ribs. Clearance between tracks shall also be not less than three (3) feet.

3. Angle bars must be used on all joints (except where connection be made to manganese steel frogs). Bad joints and sharp curves are conducive to wrecks and accidents and the trackman is responsible for these conditions. Knuck curves are not thought of in this connection, as they are clearly a necessary condition and at a point where cars are brought to rest.

4. The trackman is responsible for the safety of the men in his charge and he must see at all times that they are working under safe conditions.

5. The trackman must see that his tools are adequate and in safe condition. Cleavers and spike mauls with burred heads will not be allowed. Spike bars must be sent to the shops regularly for repairs.

6. The trackman must see that his men are properly instructed and that they are careful workmen. New men shall receive particular attention until they become sufficiently experienced. All men on track shall have due regard for their own safety and that of their companions. Care must be taken in handling rails and ties as many accidents have been caused by their careless handling.

7. Rails, ties and spikes shall be recovered from worked out headings as soon as practicable, as a newly worked out heading will be in reasonably safe condition. By waiting too long it may become very unsafe and result in loss of valuable material.

8. In all track work due regard must be given to the movement of cars, and other mining operations. No track work shall be prosecuted on the Slope tracks while the trips are running except in emergency and under direction of the Mine Foreman or assistant.

RULES FOR PUMPERS

1. Pumpers shall be governed by general "Electrical" and "Mechanical Shops" rules.

2. Pumpers shall carefully oil and inspect their equipment before starting the pumps. Report any irregularity to the Electrician or Master Mechanic.

3. Pumpers shall examine roof, ribs, and face around pump station and their traveling ways, and report any unsafe condition to the Mine Foreman or assistant.

4. Pumpers must not go anywhere not called for in their regular line of duty.

RULES FOR COMPRESSOR ROOM

1. Compressor men will be governed by the general "Electrical" and "Mechanical Shops" rules, and other rules herewith pertinent to their work.

RULES FOR CRUSHER

1. Crusher man must check oil and equipment before starting up.

2. Crusher must not be oiled or started by other than authorized workmen.

3. Repair work on crushers is attended by certain hazards, which must be carefully considered. Use only safe slings, keep workmen in the clear, use care in placing tools, material, or parts so that they will not create a hazard by men stumbling or falling over them, or their falling on men working below. Especial care should be used in selecting men for this work.

CARBIDE

1. Under no condition must anyone carry more than one day's supply of carbide while riding in the skip. A day's supply should be carried in a closed can provided for that purpose. Large cans containing carbide must be hauled with tools and must have tight-fitting covers.

2. Do not hold lighted lamp over carbide can, as there may be gas generated, which will explode and burn you.

3. Dump all refuse from carbide lamp in tram cars.

TOOLS

1. Axes, saws and other tools must be placed where there will be no danger to a passerby.

2. All tools such as cold chisels, cold sets, fullers, hammers, sledges, drills, etc., must be kept dressed. No tools with mushroomed heads shall be used.

3. Clean up after completing each job and remove all tools and other material and leave the place in as clean or better condition than you found it.

ACCIDENTS AND FIRST AID

1. In case of accident move patient as little as possible until "first aid" is rendered.

2. Foreman must be located and notified of accident as soon as possible.

3. Never leave an injured person alone.

4. Never take patient to the first aid material but the first aid material to the patient.

5. Keep cool in case of accident. Excitement may cause more damage.

6. In case of a serious accident, notify or send for Doctor immediately.

7. All accidents must be reported to the Superintendent on the date of the accident by the Foreman.

8. All injuries no matter how trivial must receive attention. Infection frequently causes blood poison which is serious and may be fatal.

(A) TREATMENT FOR ELECTRIC SHOCKS

1. Hope of restoring the victim of accident electric shock lies in prompt and continued use of artificial respiration. The reasons for this statement are:

(a) The body continuously depends on an exchange of air as shown by the fact that we must breathe in and out about fifteen times a minute.

(b) If the body is not thus repeatedly supplied with air suffocation occurs.

(c) Persons whose breathing has been stopped by electric shocks have been reported restored after artificial respiration has been continued for approximately two hours. The Schaefer or "Prone Pressure" method of artificial respiration is illustrated and described in the following resuscitation rules. The advantages of this method are:

(1) Easy performance; little muscular exertion is required.

(2) Larger ventilation of the lungs than by the supine method.

(3) Simplicity; the operator makes no complex motions and readily learns the method on first trial.

(4) No trouble from the tongue falling back into the air passage.

(5) No list of injuries to the liver or ribs if the method is executed with proper care.

Aid can be rendered best by one who has studied the rules and has learned them by practice on a volunteer subject.

INSTRUCTIONS FOR RESUSCITATION

(Follow these instructions even if victim appears dead.)

1. Break The Circuit Immediately:

(a) With a single quick motion separate the victim from the live conductor. In so doing avoid receiving a shock yourself. Many have by their carelessness received injuries in trying to disconnect victim of shock from live conductors. OBSERVE THE FOLLOWING PRECAUTIONS:

1. Use a dry coat, a dry rope, a dry stick or board, or any other dry nonconductor to move either the victim or the wire, so as to break the electrical contact. Beware of using metal or any moist material. The victim's loose clothing, if dry, may be used to pull him away; do not touch the soles or heels of his shoes while he remains in contact—the nails are dangerous.

2. If the body must be touched by your hands, be sure to cover them with rubber gloves, rubber sheeting, or dry cloth, or stand on a dry board or on some other dry insulating surface. If possible, use only one hand.

3. If the victim is conducting the current to ground, and is convulsively clutching the live conductor, it may be easier to shut off the current by lifting him than by leaving him on the ground and trying to break his grasp.

4. Open the nearest switch, if that is the quickest way to break the circuit.

5. If necessary to cut a live wire, use an ax or hatchet with a dry wooden handle, or properly insulated pliers.

2. Send For The Nearest Doctor:

(a) This should be done without a moment's delay, as soon as the accident occurs, and while the victim is being moved from the conductor.

3. Attend Instantly To Victim's Breathing:

(a) As soon as the victim is clear of the live conductor, quickly feel with your finger in his mouth and throat and remove any foreign body (tobacco, false teeth, etc.). Then begin artificial respiration at once. Do not stop to loosen the patient's clothing; every moment of delay is serious.

(b) Lay the subject on his belly, with arms extended as straight forward as possible, and with face to one side, so that nose and mouth are free for breathing. Let an assistant draw forward the subject's tongue. If possible, avoid so laying the subject that any burned places are pressed upon. Do not permit by-standers to crowd about and shut off fresh air.

Figure 1.

(c) Kneel straddling the subject's thighs and facing his head; put palms of your hands on

the muscles of the small of the back, with thumbs nearly touching each other, and with fingers spread over the lowest ribs.

Figure 2.

(d) With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the subject. This operation, which should take from two to three seconds, must not be violent—internal organs may be injured. The lower part of the chest and also the abdomen are thus compressed, and air is forced out of the lungs.

Figure 3

(e) Now immediately swing backward, so a
to remove the pressure, but leave your hand
in place, thus returning to the position firs
assumed. Through their elasticity, the ches
walls expand and the lungs are thus supplie
with fresh air.

(f) After two seconds swing forward again
Thus repeat deliberately twelve to fifteen
times a minute the double movement of com-
pression and release—a complete respiration
in four or five seconds. If a watch or clock
is not visible, following the natural rate of
your own deep breathing—swing forward with
each expiration, and backward with each in-
spiration. While this is being done, and as-
sistant should loosen any tight clothing about
the subject's neck, chest or waist.

(g) Continue artificial respiration (if neces-
sary, two hours or longer), without interrup-
tion, until natural breathing is restored or
until a physician arrives. Even after natural
breathing begins carefully watch that it con-
tinues. If it stops, start artificial respiration
again. During the period of operation, keep
the subject warm by laying beside his body
bottles or rubber bags filled with warm (not
hot) water. The attention to keeping the sub-
ject warm should be by an assistant or as-
sistants.

If in doubt about any rule apply to Fore-
man or Superintendent for explanation.

It is not possible or practical to include
every rule in this book, and violation of any
special rules or accepted practices will not ex-
cuse employee from discipline.

REPUBLIC STEEL CORPORATION
Birmingham District

Date .....

I hereby acknowledge receipt of a Book of Rules for the Ore Mines and Quarries.

I pledge myself to read them carefully, obey them, and do all I can to avoid accidents to myself and fellow workmen.

Signed .....

Check No. ..... Dept. .....

FOREMAN'S STATEMENT

I gave the above man, Check No. ..... a copy of the Rule Book. He was also personally instructed as to the dangers of his work.

Signed .....

This sheet must be filed in the office of your Department Head.

4469 DEFENDANTS' EXHIBIT No. 24.

Defendants' Exhibit 24 is an envelope, on the back of which appears the following:

Statement Period Ending July 15, 1941.

213

419-05-5901

213 Louis Tarrant.

TT	Hours	@	$ 21.06
.....	"	@	....
.....	Tons	@ 26	114.60
.....	"	@ 31	19.28
.....	Yards	@	7.20
	Total Wages		$162.14
F. O. A. B. Tax		1.09	
Ala. Unemployment Tax		.98	
Cash Advance		....	
Check Store		3.84	
Rent		....	
Coal		....	
Physician		1.75	
Commissary A C		34.35	
Change House		....	
Brass Checks		....	
Miners' Supplies		52.59	
Hospital		....	
Lights		....	
Safety Lamp		.60	
Insurance		....	
	Total Deductions		95.20
	Cash Pay Day		66.94

Republic Steel Corporation.
Birmingham District.
Raimund Mine.

Received Payment .....

4470 DEFENDANTS' EXHIBIT No. 25.

Tennessee Coal, Iron & Railroad Company,
Muscoda Division.

Minutes of Meeting.

Held in Superintendent Ewing Carter's Office, February 18, 1936.

Those present were:

Mr. Ewing Carter, Superintendent,
Mr. W. C. McKenzie, Div. Engineer,
Mr. M. E. Baird, Gen. Sup'ts. Clerk,

and the following Committee from the Muscoda Local No. 123, International Union of Mine, Mill & Smelter Workers:

Mr. B. H. Barksdale (w)
Mr. Pete Dulaney (w)
Walter Ward (c)
Derry Wilson (c)
Louis McCreary (c)

The meeting was called to order at 4:30 P. M., by Mr. Ewing Carter, Superintendent.

Mr. Carter:
What have you to discuss today?

Mr. Barksdale:
We have the names of four men that we think are making too much time—Hershall Luther, Spurgin Sumlin, W. W. Batson and Grady Elam.

Mr. Carter:
The time is being divided as equally as possible, taking into consideration the fact that quite frequently it is im-

possible to work the next man because it will interfere with his regular shifts. Some of these men have been working on specialized jobs and we will continue to work the best trained men on these jobs.

Mr. Barksdale:

We have a nice loading station in No. 6 now and I would like to get a ruling about the men staying in line when they go out to catch the skip.

Mr. Carter:

Any man that is caught pushing will be disciplined, as men are liable to get hurt.

Mr. Barksdale:

I have been getting complaints that Wilson Goodwin (w), U. G. Carpenter is getting too much time.

Mr. Carter:

Wilson Goodwin will not get any more time than any of the other U. G. Carpenters.

Mr. Barksdale:

Some time ago I asked you about seeing if you could give Will Smith (c) some light work. He has heart trouble and the doctors say he can not do any heavy work.

Mr. Carter:

We have no light work to give him. I would not put him on any kind of a job without the advice of the doctors. I would not use a man that is physically unfit as if something happened to him we would be responsible.

Meeting adjourned at 5:00 P. M.

B. H. BARKSDALE,
For the Committee.

EWING CARTER,
Superintendent.

4472 DEFENDANTS' EXHIBIT No. 26.

Tennessee Coal, Iron & Railroad Company,
Muscoda Division.

Minutes of Meeting.

Held in Superintendent Ewing Carter's Office, December 31, 1934.

Those present were:

Mr. Ewing Carter, Superintendent,

and the following Committee from the Muscoda Local No. 123, International Union of Mine, Mill & Smelter Workers:

Byrd Barksdale (w)
R. B. Autrey (w)
J. A. Mason (w)
M. E. Adams (w)
Bill Baylor (c)

The meeting was called to order at 9:15 A. M., by Mr. Ewing Carter, Superintendent.

Mr. Carter:
What can I do for you?

Mr Barksdale:
We have learned that when the mine resumes operation, tomorrow, that you do not propose to rotate the Section Foreman, that is, you intend to let the Section Foreman work six days per week. We do not think that is fair to the other Section Foremen. It will also mean that

Drag Operators and Drill Runners will be demoted to take care of these Section Foremen. We have always made a good safety record by allowing the Section Foremen to split time and we think that practice should be continued.

Mr. Carter:

The placing of Section Foremen is strictly a function of the Management. We have been following this practice at Wenonah and Ishkooda for some time and we are satisfied with the results.

Mr. Barksdale:

Could we talk to Mr. Ball about this matter?

Mr. Carter:

Yes.

At this point Mr. Ball came in the meeting and Mr. Barksdale made the same statement as above.

Mr. Ball:

It is unfortunate that we do not have sufficient work at this time for all Section Foremen. We will not change the Section Foremen. This is a function of the Management as we are responsible for results. From our experience at Wenonah, where we have been operating for the past year, and at Ishkooda where we have been operating since December 13th, we find that we get more efficiency and better safety by keeping the same Section Foremen. This same practice will be followed at Muscoda. Is there any other matter you wish to take up?

Mr. Barksdale:

Yes. We understand you have discontinued the Tallyman.

Mr. Ball:

The Tallyman has been abolished and the Timetaker will stay at the tallyhouse. We find that we get better results by keeping the Timetaker outside. Each Section

Foreman, Timber Foreman, Track Forman, etc., will make a distribution of the men in his charge which will be a check against the Timetaker. This practice has been followed on surface here for a number of years and at a great many of the large mines in the country. We feel that this is an advance step in timekeeping. It has been in use at Wenonah and Ishkooda for the past 15 days and has proved very successful.

There was no further business and the meeting adjourned at 9:50 A. M.

....................,
For the Committee.

EWING CARTER,
Superintendent.

Note: Committee was asked if they wanted a copy of these minutes and they replied that they did not.

4474 DEFENDANTS' EXHIBIT No. 27.

Tennessee Coal, Iron & Railroad Company,
Muscoda Division.

Minutes of Meeting.

Held in General Superintendent E. M. Ball's Office, January 18, 1935.

Those present were:

Mr. E. M. Ball, General Superintendent,
Mr. A. W. Beck, Chief Engineer,
Mr. M. E. Baird, General Supt. Clerk

and the following Committee from the Muscoda, Wenonah and Ishkooda locals of the International Union of Mine, Mill & Smelter Workers:

Byrd Barksdale (w), Muscoda Local No. 123,
Charlie McDaniel (w), Wenonah Local No. 157,

M. C. Anderson (w), Ishkooda Local No. 153,
Bill Baylor (c), Muscoda Local No. 123,
Will Mahan (c), Wenonah Local No. 157.

The meeting was called to order at 9:30 A. M., by Mr. E. M. Ball, General Superintendent.

Mr. Ball:

At the meeting held in this office on January 11th this Committee brought up several complaints. They were—Adjustment in rates of pay for certain Sanitary Department Employees; division of time between Section Foremen of No. 4 and No. 6 Mines; request that Joe McCord, Sam Lige, and Julius Byrd be reimbursed for time lost as a result of being suspended for thirty days for Public Unlawful Conduct, and that the position of Tallyman be re-established. In order to expedite this meeting I have prepared written memorandums in answer to your complaints which will be incorporated in the minutes of this meeting, and which I will now read to you.

Requesting an Adjustment in rate of pay for Certain Sanitary Department Employees:

With regard to this question you have raised three points:

The *first* is that you are complaining against the division of time between these employees. My answer as given to you in a meeting held January 11th, 1935, with respect to this particular question remains unchanged, to wit, "that the additional men put on during the strike period will continue to serve in the Sanitary Department until such time as we can find work for them in the Operating Department."

The *second* point has reference to the increased pay for the Sanitary Wagon Drivers. These men were given

a ½ cent per house raise, effective August 1st, 1934, which put them on a parity with the highest rate paid for like service in any other operation of the Company and we cannot go beyond that figure.

The *third* point relates to rates of pay for Sanitary Labor. The rate of pay for Sanitary Labor on the mountain was increased from 29-½ cents to 33-½ cents per hour and made effective August 1st, 1934. This rate like that of the Drivers compares with the highest rate paid for Sanitary Labor in any other operation of the Company, and no further increase can be made in the case of these laborers. There is, however, a question of fairness involved and that question is the date that the rate was made effective. In giving this question further study, we have reached the conclusion that, in fairness to these men, these rates should have been made effective June 25th, 1934, both in the case of the Sanitary Laborers and the Drivers, and it is our intention as a matter of fairness to these employees, to make the rates effective June 25th, 1934, rather than August 1st, 1934.

Request that Joe McCord, Sam Lige and Julius Byrd be reimbursed for time lost as result of being suspended for thirty days for Public Unlawful Conduct:

Our reply to this request is as follows: Our action in disciplining these men was based on a claim made by one Lawrence Harris. He picked these two men out, Joe McCord and Sam Lige, as being those who assaulted him; the third man in the case, Julius Byrd, being the driver of the car that took these men from the scene of the assault. Harris, in addition to charging these men with being those responsible for assaulting him, later swore out warrants for their arrest. Later, when the trial came up, he declined to testify against them, evidently having changed his mind for reasons best known to himself.

The Management in taking the action they did acted in the best of faith and I think you men agree that the Company cannot be held responsible in such cases where some employee decides to change his mind.

At this point, it might be well to make clear to you men that the application of discipline by the Management of this Company does not depend on the conviction of the party or parties charged with assault. Discipline is applied in all cases where we are in possession of correct and reliable information and this is true in this case.

Having acted in the best of faith and on information we consider reliable and which is still available, we must decline to pay these men for the time lost as a result of this suspension.

Request that the Position of Tallyman be Re-Established:

This step was taken in the interest of economy efficiency and the elimination of the duplication of work and not with any idea of instituting or instigating what you men refer to as "the stretch out system". As explained to you in our meeting held January 11th, 1936, in placing the timekeeper at the Tallyhouse instead of underground as heretofore, his duties were not increased, on the contrary, they were decreased to the extent of requiring the underground foremen to make out certain reports which had heretofore been made out by the timekeeper. The claim that your committeemen make to the effect that under the understanding reached in June, 1934, all men would be put back to work on their former occupation is true, and we fulfilled that promise. That understanding did not mean, however, that we would not be permitted to discontinue such occupations as in the opinion of the Management were unnecessary.

The duties and responsibilities of keeping the time of employees, I think you men will have to admit, is the responsibility of the Management; this being true, I cannot agree with your claim that it is a question that should have been taken up or discussed with your committeemen before any action was taken, and as far as the Management is concerned, the change as made will stand.

Requesting a Division of Time between Section Foremen of Nos. 4 & 6 Mine:

With regard to this request in which you ask that the question involved be submitted to arbitration, we must confess that we are at a loss to understand why you would request arbitration on a question involving division of work as there is nothing of record, either oral or otherwise, that permits this question to be brought up or discussed. As you men know, and particularly so far as the Section Foremen are concerned, it has been our practice for years, or to be more specific, since the inauguration of the division of such work as was available, to confine the division of work among those below the rank of Section Foremen, and as a matter of fact the division of work was a voluntary act on the part of the Management and for the purpose of giving as much work as possible to all of our employees, and at this point I want to make it clear that the Management of this Company is under no obligation to continue that policy.

Aside from all this, the question of the selection and placing of our supervisory forces is purely a duty of the Management. Such matters have always been handled by the Management and will continue to be handled by them. All of which necessarily means that so far as the question of arbitration goes on this matter, we must decline to enter into it.

As outlined in letter under date of June 25, 1934, addressed to Miss Frances Perkins, Secretary of Labor, copy of which you have in your possession: "It is understood that the Management of the mines is vested exclusively in the Company."

Mr. Ball:

For your information, we are now going over our records from June 25th to August 1st to determine the Sanitary Department employees that are entitled to this difference in rate and the number of days they worked during that period. Just as soon as this information is obtained we will call those employees to the office on some day other than a regular pay day and pay them in *case* for the difference in rate for every day worked between June 25th and August 1st.

As there was nothing further to come before this meeting it was adjourned at 9:50 A. M.

Mr. Byrd Barksdale was appointed by the Committee to sign these minutes.

B. H. BARKSDALE,
For the Committee.

E. M. BALL,
Gen. Supt. Iron Mines & Quarries.

4479 DEFENDANTS' EXHIBIT No. 28.

Tennessee Coal, Iron & Railroad Company.
Muscoda Division.

Minutes of Meeting.

Held in General Superintendent E. M. Ball's Office on June 24th, 1935.

Those present were:

Mr. E. M. Ball, General Superintendent,
Mr. Ewing Carter, Supt., Muscoda,
Mr. G. B. Neal, Jr., Supt., Wenonah,
Mr. C. B. Cameron, Supt., Ishkooda,
Mr. A. W. Beck, Chief Engineer,
Mr. M. E. Baird, Gen. Supt. Clerk,

and the following Committee from the Red Mountain locals of the International Union of Mine, Mill and Smelter Workers:

Mr. A. E. Horn, President District 5,
Mr. Van Jones, International Representative,
Mr. Byrd Barksdale, President, Muscoda Local,
Mr. Charlie McDaniel, President, Wenonah Local,
Mr. M. C. Anderson, President, Ishkooda Local,
Mr. M. E. Adams, Muscoda Local,
Mr. Ed Sizemore, Ishkooda Local,
Mr. Arthur Cox, Wenonah Local,
Bill Baylor, Muscoda Local,
Will Mahan, Wenonah Local,
Morris Smith, Wenonah Local,
Orange Wilson, Ishkooda Local.

The meeting was called to order at 3:05 P. M., by Mr. E. M. Ball, General Superintendent.

Mr. Ball:

Mr. Horn, would you mind making the statement you made in Mr. Perry's office this morning for the benefit of my Superintendents?

Mr. Horn:

I told Mr. Perry that if we could come to an understanding about the division of time that I would go with these men to their meetings and try to sell them the settlement contained in Mr. Perry's letter.

Mr. Ball:

I believe that we talked about the Section Foremen, Timbermen and Trackmen. We should also divide the time of the Underground Carpenter who is the chute builder. We talked this matter over, Mr. Perry, Mr. Abbott and myself, after you left, as we told you we would do. They left this matter up to me, that if we could get the same results as to efficiency and safety as we are now doing, we will be willing to try it. Our record of lost-time accidents is bad and I do not want to do anything that will make that record worse. We will divide the time, only if our accident and efficiency record is as good, or better, than it is now. I believe that it is the opinion of Mr. Barksdale, Mr. McDaniel and Mr. Anderson that it will be just as good, or better, than now. Is that true?

Mr. McDaniel:

I believe it will be better.

Mr. Anderson:

I think it will be better.

Mr. Barksdale:
I feel sure it will be better.

Morris Smith:
I believe it will be better.

Will Mahan:
I think it will be better.

Mr. Ball:
Mr. Van Jones, you have been a Section Foreman here, what is your opinion?

Mr. Jones:
Mr. Ball, I think I can speak from experience. When I was a Section Foreman here I was often moved from heading to heading and I did not have any trouble. A good Section Foreman must be very particular about safety in going into a new working place. If he knows his men he can caution them about unsafe practices.

Mr. Barksdale:
Mr. Ball, when we got that Safety Certificate, the Section Foremen were changing with their crews. If a Section Foreman knows his men and has the same crew he can give them closer attention.

Mr. Ball:
You believe if the Section Foreman changes with his crew he will know his men better?

Mr. Barksdale:
Yes, sir; it is like playing baseball, if you change the team every day you will not get results. Each man will learn the other's movements if they work together all the time.

Mr. Ball:

We want to run these mines as safe as possible. As I said, we have had an increase in lost-time accidents recently, but we are willing to try anything that will get better results. Several years ago we used to change all men when on part time operation, including the Section Foremen, Timbermen, Trackmen and U. G. Carpenters.

Mr. Barksdale:

Some of these lost-time accidents occurred when the men were not under a Section Foreman. Some were hurt getting in or out of the skip.

Mr. Ball:

That is true. The only way we can stop that is by discipline. We will have to discipline some of these men and I believe you men will go along with us along that line. Some men are hurt even if they are with a Section Foreman. We had an accident recently in No. 6 Mine when W. I. Sellers was hurt and the Section Foreman was there.

Mr. Anderson:

Most of the Ishkooda accidents have been mule accidents.

Mr. McDaniel:

Mr. Ball, could you tell us the number of accidents where men have been hurt in the headings for this year and last?

Mr. Ball:

We will be glad to go into a discussion of accidents with your Committee at frequent intervals but I do not think we can go into that today.

Mr. McDaniel:

We just want you to know that we are willing to co-operate with you in every way. I believe that we will have a better record than ever before.

Mr. Ball:

We are willing to try a division of the time for Section Foremen, Timbermen, Trackmen and U. G. Carpenters. If it works to the advantage of the Company in safety and efficiency it will stand, otherwise, we will have to make a change. Is that statement clear and fair? We are not establishing a precedent and if we do not get results we will go back to the old method, or try some other method of supervision for these occupations.

Mr. Horn:

That is fair.

Mr. Ball:

While I think of it, Mr. Horn, Mr. Abbott asked me to find out if you were going to make any statement to the press relative to this settlement. If so he would like to discuss it with you and if the Company makes any statement it will do the same by you.

Mr. Horn:

I have no idea of making any statement to the press about this settlement. I am not much of a believer in too much publicity as it only creates hard feelings. I will be glad to cooperate in any way with Mr. Abbott.

Mr. Ball:

I am authorized to tell you that No. 8 Mine at Wenonah will go into operation on fine crushed ore as soon as we can get ready. You men understand that we have several Mine Foremen and Assistant Mine Foremen that will have

to be demoted to Section Foremen and this will mean that some of our present Section Foremen will have to be reduced. The Mine Foremen and Assistant Mine Foremen that are reduced to Section Foremen will split time just the same as the other Section Foremen. I know you men will understand that.

Mr. Horn:

As a suggestion, when I was President of the Woodward Local, Mr. Berg gave us information on accidents that occurred and we discussed these accidents and cautioned our men not to get hurt. I think if we could do something like that here we would be able to help you and eliminate some of these accidents.

Mr. Ball:

Mr. Horn, we will be glad to give that suggestion due consideration.

Mr. Horn:

I feel that it will help you and help the men.

Mr. Ball:

We are going to try to so arrange our men that the Section Foremen and other men will get the same amount of time. This will probably take at least a week or ten days to make the schedules and I ask that you men be patient. Do not expect every man to get the same amount of time as the other man every week as we will probably have to divide the time over a period of a month. With our irregular schedule of operations it is very hard to divide the time equally each week but I assure you men that my Superintendents and myself will make every effort to divide the time as equally as possible.

Mr. Barksdale:

That applies to the shop and surface men the same as the underground men? I know I will be asked that question.

Mr. Ball:

Yes, it will apply to all men below the rank of Assistant Mine Foreman. We are already dividing the time at the shop. We will do everything we can to divide the time equally and fairly.

Mr. Barksdale:

We would also like to help along the lines of reducing costs, such as materials used.

Mr. Ball:

We are at all times glad to have the cooperation of our employees. We want every man to get all the material he needs for his working place but we want to stop the waste of material.

Mr. Barksdale:

Would you tell us, say once each month, what we saved over the previous month?

Mr. Ball:

We are always glad to tell our employees that they have done good work, when it had been proved by results.

Mr. Anderson:

Do I understand that the Mine Foremen and Assistant Mine Foremen will remain as they are?

Mr. Ball:

Yes.

Mr. Anderson:

We have Ore Inspectors at Ishkooda that carry a Section Foreman's rate. Will they be changed so as to divide time?

Mr. Ball:

Yes, they will be put on part time basis like other Section Foremen.

Bill Baylor:

Mr. Ball, as a member of this Committee, we thank you for your cooperation and your hospitality. We will do our best to cooperate with you and with the Company.

Mr. Ball:

As a representative of the Company, I thank you very much.

Has anyone else anything to say?

Mr. Jones:

How are we going to sell this proposition to the men? Have you any ideas?

Mr. Ball:

You will have to go to the men and be sincere; explain to them the situation as set out by Mr. Perry, but at this time conditions do not warrant what you have asked for and for that reason the Company can not grant their request. You will have to put your cards on the table, just as we have done here. You can explain that our present working agreement has been satisfactory and I believe that they will see that. We hope that our Sales Department will be able to get orders so that we can increase our mining operations.

Mr. Jones:

I was in a conference last week and the Company made us a proposition and the President asked me if I would recommend it to the men. I told him that if I did it would be over the phone because if I went to the hall they would throw me out the window. Our hall here is only one story and I would not have so far to fall.

Mr. Ball:

I think the recommendations of this Committee will be sufficient. The men in your locals have put their affairs in your hands and they know that you have done the best you can for them. I believe that is a fair statement and will do the trick.

Mr. Horn:

I think that with the proper understanding between the Company and the men that now exists, I do not feel that there should be any difficulty. We are having meetings tomorrow and we shall be glad to advise you as to the outcome of these meetings Wednesday morning.

Mr. Horn (Continuing): It was agreed that this Committee would meet in Mr. Ball's office again at 9:00 A. M., Wednesday morning to advise Mr. Ball as to the outcome of the meetings.

Mr. Barksdale and Mr. McDaniel were authorized to sign the minutes of this meeting.

Meeting adjourned 3:50 P. M.

B. H. BARKSDALE,
C. J. McDANIEL,
For the Committee.

E. M. BALL,
Gen. Supt., Iron Mines and Quarries.

4486 DEFENDANTS EXHIBIT No. 18.

The Ore Miner.

—Safety—

May, 1939 Issue No. 11

Tennessee Coal, Iron & R. R. Co.,
Ore Mines & Quarries.

Page 12.

Underground Fire Safety: * * * *

6. No smoking is allowed while riding in and out of the mine.

* * * * *

4487 DEFENDANTS' EXHIBIT 17.

The Ore Miner.

—Safety—

Nov. 1938 Issue No. 5

Tennessee Coal, Iron & R. R. Co.,

Ore Mines & Quarries.

Page 7.

Do You Know That

The burning of one piece of timber underground the size of a track tie may result in the death of anyone

who may happen to be caught in the resulting smoke and gasses; and that a fire this size may necessitate shutting down the section of the mine through which the smoke and gasses pass?

In several instances in the past, methane gas has been found in old workings of our mines, and that going into old workings with an open light is dangerous?

4488 DEFENDANTS EXHIBIT No. 16.

The Ore Miner.

Safety.

July 1939 Issue No. 13

Tennessee Coal, Iron & R. R. Co.,
Ore Mines & Quarries.

Page 8.

The Back Cover.

"Unseen Dangers" account for many of our accidents in mining. They are termed "Unseen Dangers" because, unless a miner is constantly on the alert he may receive an injury from some one of those dangers. Actually, there are very few hazards in mining which cannot be seen and guarded against.

A man, not seeing a failed hole, may drill into it and be killed. Yet, if he had looked carefully for failed holes before starting to drill he would have discovered

the failed hole and consequently he could have eliminated the danger.

A man, walking along a haulage road with a piece of steel on his shoulder does not see the electricity in the trolley cable which may kill him if the steel comes in contact with it. He knows, however, that the cable is there for the purpose of carrying electricity and he has been taught never to carry steel on his shoulders. This "Unseen Danger" can therefore be eliminated through making it a practice never to carry any steel, or any material on the shoulders which may cause you to come in contact with the electricity in the trolley cable.

An "Unseen Danger" in the truest sense of the word exists in all old workings. In such places there is always the hazard of an accumulation of methane gas. Anyone going into such a place with an open light is exposing himself to a danger which has taken at least one life in our Ore Mines. Never go into an old working with an open light.

Another "Unseen Danger" exists in loose dynamite which may be in muck piles. This condition is usually caused from robbed holes and there has been at least one accident in our Ore Mines resulting from dynamite in the muck pile being exploded by scraper. The best guard against this danger is to eliminate, as much as possible, robbed holes. This can be done best by proper timing of shots.

(back cover)

UNSEEN DANGERS

DEFENDANTS' EXHIBIT NO. 14

THE ORE MINER
SAFETY

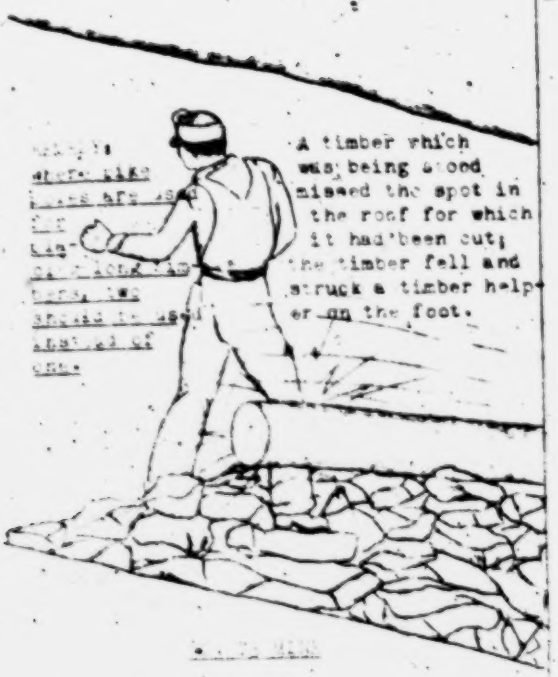
I. U. No. 17.

DEC. 1939 TENNESSEE COAL, IRON & RAILROAD CO.
THE M.K. & O. DIVISION

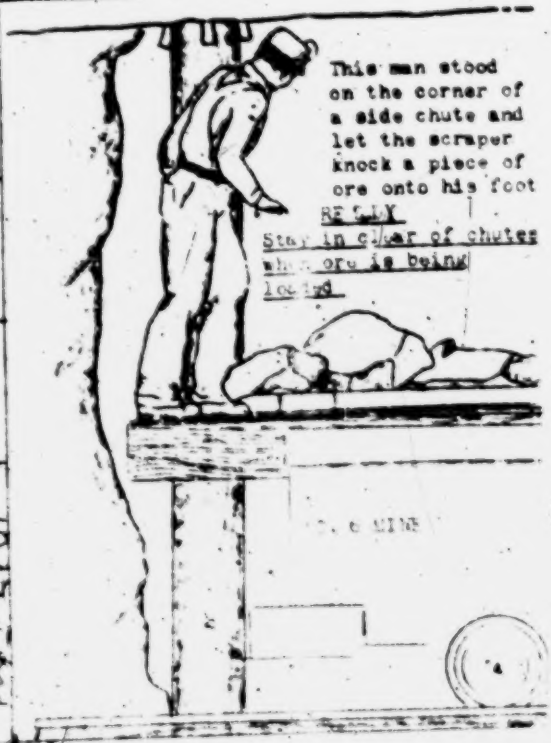
Page 4.

4

LOST TIME ACCIDENTS FOR NOVEMBER



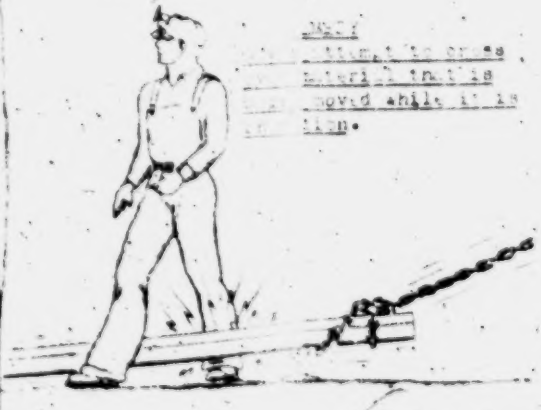
A timber which was being stood missed the spot in the roof for which it had been cut; the timber fell and struck a timber helper on the foot.



This man stood on the corner of a side chute and let the scraper knock a piece of ore onto his foot

RE CLY

Stay in clear of chutes when ore is being loaded



Stolen Rides: When the shift is over and you are hoodlum bound from your working place don't let that overwhelming desire for a ride tempt you into hopping on a trip of cars which might be going your way. In addition to being strictly against the rules of the Company, which fact subjects you to the possibility of immediate discharge if you are caught, this practice is very likely to result in serious injury. There are many ways in which such injuries may happen. You may miss your footing and fall under the wheels of the cars; trips may wreck; ore on loaded cars can roll back on your hands causing serious injury.

Any Motor Runner who allows anyone to steal rides on his train will be considered just as guilty as the ones stealing the rides.

4493 DEFENDANTS' EXHIBIT No. 13.

The Ore Miner.

Safety.

Jan. 1939. Issue No. 7.

Tennessee Coal Iron & R. R. Co.

Ore Mines & Quarries.

Page 7.

Duties of Drillmen: The Drillmen must go into the mine on the first man-trip at the beginning of each shift and shall be the first employee to enter the working face. He must personally examine the roof, ribs and working faces by means of a hammer and bar and with the assist-

ance of the Section Helper quarry down all loose and dangerous ground. He must immediately report to the Head Miner all loose or fallen timbers or other unusual conditions. The drillman must not allow anyone to start work until the working faces have been made safe. He must personally inspect all tools, equipment and timbers in working faces and must not permit anything unsafe to be used or allow employees to work under unsafe conditions or surroundings. The Drillman has full authority to order all men out of a working face when conditions are unsafe and must do so immediately when these conditions are found to exist. Drillmen and section helpers, before drilling can be started, must clean all loose material from drilling face and examine drilling face for failed holes and "old guns" which are liable to contain unexploded dynamite. While drilling, when it becomes necessary to move the drill machine to a new round of holes, the machine should be taken off the tripod instead of attempting to drag back the tripod with machine attached. To attempt to move the equipment without first cutting the air off and removing the machine from the tripod is dangerous due to the ease with which the machine can become overbalanced and fall.

4494 DEFENDANTS' EXHIBIT No. 9.

Filed with Board 12 21 33.

In Re:

Raimund-Red Ore Local No. 121, I. U. M. M. & S. W., Affiliated with the American Federation of Labor, Complainant,

vs.

Republic Steel Corporation, Raimund Red Ore Mines Division at Bessemer, Alabama, Defendant.

To the Regional Labor Board, Operating under the National Labor Board by Authority of the United States under the National Recovery Act, which became effective the 15th day of June, 1933.

Comes the Complainant and respectfully shows unto this Honorable Board the following facts and conditions:

First: That this Union is composed of 600 employees of the Company working at what is known as the Raimund Mines Division, and their employment consists of general red ore mining, maintenance men and those in a supervisory capacity without the right to hire and fire, and represent more than 80% of the men so employed in and around Raimund Mines of the Company, said Mines being situated in or near the City of Bessemer, Jefferson County, Alabama.

Second: History of Complaint. This Union further states that while its members were working at the Company's Raimund Mines and during the months of July and August, 1933, they did perfect a bona fide Labor Organization, which Organization has continuously functioned up until this time and is now functioning with 97% membership of the entire employees of the Company at this Mines.

That immediately prior to their organization the Company, through its agents and Attorney did require this Union's membership to attend what is called a Mutuality or Company Union meeting and attempted to declare that they were organized into what is known as a Company Union; and the Company designated certain men who should be their representatives, etc.

This Union's membership repudiated, disowned and never actively recognized in any way the Company Union, but immediately proceeded to organize under Section 7 of the National Recovery Act a bona fide Labor Union and one of its own choosing. And in the formation of this Organization the Company immediately through its foremen and superintendents at Raimund, began to antagonize, intimidate, discharge, and otherwise punish and oppress the Union members. The Company also invoked a number of oral rules, of which they would discriminate, discharge and lay off or penalize for a number of days, members of this Union. At this time Government Conciliator, from the Department of Labor, namely: Mr. C. L. Richardson, who was located in the Birmingham District, was called upon and he took part in some of the controversies above referred to and attempted to smooth out and reconcile the situation.

The Union, through its duly authorized representatives, called upon the officials of the Company for the purpose of adjusting these troubles and make complaint of the discriminations above referred to; and Mr. Oldham, its President, while refusing to recognize the Union some of the representatives of the Union did discuss conditions with him and he promised to look into the matter and straighten same out. There were several meetings had between the officials of the Company and representatives of the Union along these lines but the 'bone of contention' in these meetings was that Mr. Oldham wanted to

recognize these men as representatives of the Company Union and not representatives of the Regular Union, and with the exception of about two weeks the Union membership has received no relief from the policies and treatment imposed upon its membership by the Company. And further, these various representatives being employees of the Company would immediately become targets for the foremen of the Mines and they would abuse, threaten, and curse them and attempt to find fault with their work, and in many instances discharged them. The Company's superintendents and foremen have continuously up until the time of the declaring of a 'work holiday' by the men have continued to discharge the officers of the Union, members of its Committees; and also from time to time abused, threatened to discharge and discharged members of the Union, the total of which men discharged by the Company would amount to not less than fifty. And the last two or three weeks before the 'work holiday' was declared by the Union, to-wit: December 18th, 1933, this practice was considerably increased to the extent that it was almost impossible to keep representatives of the Union working on the job; and by way of illustration the present President of the Union found it impossible to work under the oppressive and discriminatory tactics employed by the Company, in fact, this is the third president inside of four months that has been compelled to cease working for the Company on account of the above mentioned reasons, besides other officers and committeemen of the Union.

In their further efforts to break down the Union and destroy it; in one instance where a number of grievances in writing, a copy of which is hereto attached, were presented to the company by representatives of the Union, which grievances attempted to clear up and create a more harmonious relation between the Company and the Union, the officials of the Company immediately caused to be

circulated in the Mines a petition for the purpose of repudiating the Committee's request and further for the purpose of disrupting the established Union. The foremen in presenting this petition to the men threatened to discharge them or punish them if they did not sign same and in many instances refused to let them see what they were signing, and in many instances names of men appeared on the petition who did not sign same, or authorize any one else to do so.

Complaints: The Union charges:

1. That the Company at the time of the creation of this Union threatened to discharge and did discharge men for joining this Union.

2. That the Company has threatened to discharge and has discharged duly elected officers and duly elected representatives of this Union on account of their affiliation with same.

3. That the Company through its various foremen has intimidated, threatened, cursed and discharged members of the Union on account of a demand for improved conditions, which demand was made by the duly authorized representatives of this Union.

4. That the Company has refused to deal with or recognize the duly authorized representatives of the Union, which Union represented more than 80% of the Company's employees at Raimund Mines at that time.

5. That the Company has discriminated against the Union in that they have increased the amount of work placed on Union members because of their affiliation with the Union, and has not placed same on non Union members.

6. That the Company has falsely accused members of the Union of violating some Company rule and penalized them by making them lay off from 3 to 15 days on account of same.

7. That the Company has taken jobs away from members of the Union and placed them in other jobs more disagreeable or with cheaper scales on account of their membership with the Union and replace them with green or inexperienced men.

8. That the Company has threatened or refused to reinstate or employ members of the Union on account of their membership in the Union, and thereby discriminated against the Union men.

9. That the Company has accused members of the Union of making non members to join the Union, and discharged them or laid them off for such accusation.

10. That the Company has discharged members of the Union on account of them asking non members to join same, and told the discharged members that they were doing it for that reason.

11. That the Company has refused to bargain collectively with the members of this Union.

The Union in submitting the above charges also attaches hereto affidavits of its members in support of same, and also prays permission to introduce other and further affidavits if necessary.

And notwithstanding the Union's efforts heretofore made to bring about a friendly feeling of co-operation and adjustment of the above mentioned charges and grievances the Union now takes the position that it is still willing and

ready through its chosen representatives to meet and discuss with the officials of the Company; these grievances and requests, and we are now appealing to this Honorable Board to assist us in establishing a friendly and fair working condition, and to that end we hereby make the following requests:

1. That the Company recognize our Union as is required by Section 7A of the National Recovery Act in both letter and spirit.

2. That wage discrimination be discontinued.

3. That Union employees heretofore discharged and victimized be reinstated with full seniority rights and pay.

4. That all men who ceased work and participated in the "work holiday" be placed back to work and without discrimination.

5. That the "write-up system" be abolished. This system being generally known as requiring fellow employees to write up and report any evasions, shortcomings or unavoidable accidents or unintentional mistakes of fellow employees.

6. That the men be not required to enter and leave their place of work on their own time.

7. That the 8 hour work day and the 40 hour week be universally established, and that at least time and one-half time be paid for overtime, and that they be paid the same weekly wage for shorter weeks as has been heretofore paid for the longer week.

8. That the Union be given the right to designate the weighman or scale men, and that the Union Committee

have at reasonable times access to check over the weights or tally sheets.

9. That the Company doctor be on duty and subject to employees call at all times without any extra fee for same from employee.

10. That a 3 mile radius jurisdiction for doctors service be established.

11. That contract and tonnage work be abolished.

12. That the drill runner or drill man be not responsible for the muckers.

13. That no employee shall be required to live in a Company house.

14. That no employee shall be required to trade in the Company store.

And In Conclusion, we pray this Honorable Board to take jurisdiction of our Complaints and requests. And we submit ourselves to the jurisdiction of this Board to that end and urge immediate action, and agree to respond to all requests and demands made upon us by this Board.

In Witness Whereof, we hereunto attach our names, as duly authorized representatives of Raimund Red Ore Local #121, I. U. M. M. & S. W.

BYRD H. BARKSDALE,
1822½ Second Ave.,
Bessemer, Ala.
J. A. LIPSCOMB,
P. O. Box 210,
Bessemer, Ala.

This is to certify that I have this the 21st day of December, 1933, placed in the mails a true and exact copy of our complaint and request and Exhibit A to Mr. Wade H. Oldham, as Vice President in charge of Southern Properties of the Republic Steel Corporation, Empire Building, Birmingham, Alabama.

J. A. LIPSCOMB,
P. O. Box 210,
Bessemer, Ala.

A true and exact copy of grievances presented to the Company by the duly authorized representatives of the Union, same being presented on or about the 30th day of September, 1933, and marked Exhibit A—

"At a call meeting of Raimund Red Ore Local #121 Sunday afternoon a committee was selected to represent the employees to present to the management of Raimund Mines Division a grievance as to the unfair conditions and practices which are now in use at this Raimund Division. On this Committee were appointed: J. H. Bufford, President Smelters Council, L. V. Winstead, Vice-chairman of Bessemer Organizing Committee; J. C. Knowles, Recording Secretary of Raimund Red Ore #121, Grady Edwards. This committee believes that it would be to the best interest of the Company and employees that: (1) The Company recognize this Raimund Red Ore #121, I. U. M. M. & S. W. a bona fide Organization affiliated with the A. F. of L. and that (2) Mr. Will Barrett, Mr. A. J. Rector, Mr. Matt Wesson be removed from their positions as supervisors and that (3) wage discrimination among the men be discontinued, and that (4) Employees discharged by these said supervisors be reinstated with full seniority rights and that (5) the "write up" system be abolished and that (6) the men enter the mine on their own time and come out of the mine on the Company time, and that (7) the eight hour working day and the forty hour week

be instituted and that (8) the rates of pay be increased accordingly, and that (9) a man be chosen by the employees to be weighman, and that (10) (a) That the Company doctor be on the job full time. That (b) he be subject to call at any time without any extra fees from the employee that calls him. That (c) a three mile radius be set as his jurisdiction limits. That (d) a fee of $1.00 per month be charged within this limit and a fee of $.50 per month be charged outside of this limit and that (11) the reporting off system be abolished, and that (12) the tonnage and contract system be abolished, and that (13) the drill runner or drill man will not be responsible for the muckers. (14) No employees shall be required to live in a Company house, and that (15) No employee shall be discharged for not trading at the Commissary.

RAIMUND RED ORE LOCAL
No. 121, I. U. M. M. & S. W.

Committee:

J. H. BUFFORD,
Pres. of R. R. O. #121.
C. L. PEGUES,
Sec. of Bess. District Smelters' Council.
L. V. WINSTEAD,
Vice-Chairman of Bessemer Organizing Committee.
J. C. KNOWLES,
Recording Secretary, of R. R. O. #121,
GRADY EDWARDS,
ROBERT ATKINSON,
L. L. POWELL,
GUS GATEWOOD.

4501 DEFENDANTS' EXHIBIT No. 10.

State of Alabama,
Jefferson County.

Before me, the undersigned authority in and for said State and County, personally appeared Norman E. Thompson, who, being first duly sworn, deposes and says:

I am at the present time Superintendent of the Republic Steel Corporation (hereinafterwards referred to as the "Republic Company") in charge of all of its ore mining operations in the Birmingham, Alabama District. I have had supervisory charge of mining operations for about eleven years. I entered the employment of the Republic Company on October 1, 1919, and served as Engineer until I became Superintendent of the ore mining operations. I was graduated and received a degree of B. S. and Engineer of Mines from the Michigan College of Mines, and served for a few months, before coming to Alabama with the Republic Company, as Engineer of the Mesaba Syndicate Company in Minnesota.

As Superintendent of all ore mines for the Republic Company, I have had supervision over all of the ore mines of the Republic Company in the Birmingham, Alabama, District. The Company had no negotiations or contracts with any labor organizations prior to 1933. The first employee representation of any kind that it had with its employees in this District was a plan known as the "Employee Representation Plan", which was in force for a while during the administration under the National Recovery Act.

In 1933 the Raimund Red Ore Local No. 121 of the International Union of Mine, Mill & Smelter Workers, hereinafterwards referred to as the "Union" was organized at Raimund where one of the Republic Company's

mining operations is located. This organization has remained in existence down to and including the present time.

Later on another independent labor organization was formed at Raimund which was known as the "Brotherhood of Captive Ore Miners", and this organization has continued and is in existence at the present time.

The Company has never entered into a written contract with either of these organizations. A summary of the Company's relationships with these organizations may be stated as follows:

(a) On September 30, 1933, the Union, through a Committee, filed a written complaint, with the Company in which it stated, among other things, as follows:

"This Committee believes that it will be to the best interest of the Company and its employees that * * * the men enter the mine on their own time and come out of the mine on the Company time."

The Company refused to grant this and certain other requests made at the same time, and on December 17, 1933, the Union began a strike at the Raimund Mine, and on December 21, 1933, filed its complaint with the Regional Labor Board demanding, among other things, that "the men be not required to enter and leave their place of work on their own time". This complaint was heard before the Regional Labor Board at Atlanta, Georgia, and following this hearing an agreement was made under the terms of a letter directed to Mr. Marion Smith, Chairman, Regional Labor Board, which provided for the reopening of the mines under the terms therein stated, and which left

in full effect the custom which had always existed of the days work of the miners being based on their work at their usual working places on a face to face basis and without taking into consideration the time consumed in going from the portal to the working place and from the working place to the portal.

(b) In May, 1934, the Union called and conducted another strike at Raimund which strike was settled on July 14, 1934, and the men returned to work under the terms of a letter of understanding which was written by the Company to Mr. C. L. Richardson, Commissioner of Conciliation, representing the Secretary of Labor, and which was approved by the Union. No contention was made during this strike or at this time in reference to the men entering and leaving the mines on Company time, and they returned to work under the custom and usage above referred to.

(c) On July 13, 1935, the Union, acting through Mr. A. E. Horn, International Representative of District 5, R. H. Kendricks and other members of a Committee presented a number of demands in relation to employee relationships. These demands did not include any demand in reference to the men entering and leaving the mines on Company time. After a conference on these demands, the Committee was informed by the Company that the Company would continue to operate under the terms of the letter of understanding directed to Mr. C. L. Richardson, dated July 14, 1934, and referred to above.

(d) On May 21, 1936, the Union, acting through Mr. A. E. Horn, President, presented to the Company a letter requesting that a new contract be entered into upon the expiration of the time noted in the letter of understanding referred to above. In response to this request, after giving it consideration, the Company on July 30, 1936, advised the Union, sending copies of the advice to the United States

Department of Labor, that they would continue its present policy as to wages, hours and working conditions at the Raimund ore mines, and that no changes in the agreement could be made on account of existing conditions.

(e) On July 19, 1937, a new agreement was requested by the Union and on July 19, 1937, it was again informed that the Company would have to continue its present policy as to wages, hours and working conditions at the Raimund mines.

(f) Subsequent to this in the Fall of 1939, the Union filed charges before the National Labor Relations Board charging failure to bargain collectively and acts of discrimination in reference to discharge or refusal to re-employ certain employees and the domination of an alleged "Company Union". While these charges were pending, the Union presented to the Company in the early part of 1940 a proposed written contract, a copy of which is attached hereto, marked Exhibit "A", and made fully a part hereof. This contract did not request that the men enter and leave the mines on Company time. The contract as proposed was declined by the Republic Company. The proceedings before the National Labor Relations Board were settled between the Union and the Republic Company, the agreement providing, among other things, that the charges should be dismissed, certain men should be re-employed, and the Republic Company and the Union should continue their employee relationship for not less than one year under the same terms and conditions then existing. Among the terms and conditions then existing was that the men should be paid for the time that they actually worked at their working places, and should receive no pay for the time spent in going to and from their working places.

The above constitutes a summary of the situation that has existed between the Union and the Company, and which exists at the present time.

Beginning on June 7, 1935, the Committee representing the Brotherhood of Mine Workers of Captive Mines began to present from time to time their requests for new contracts and for some other changes in working conditions. At no time did this Union ever present the claim that going to and from their working places should be on company time. The same letters of understanding and of continuing the existing policy which was sent to the Union were also sent to the Brotherhood.

Affiant further deposes that during all of the time above covered, that is to say, from the time of the organization of each of these two unions, the Company has at all times met with and bargained collectively with each of these unions acting through their regularly appointed and constituted committees. The meetings with the committees have been regularly had and grievances have been submitted, considered and determined. There has not been at any time, with the exception of the instances noted above, any claim ever made on the part of any employee of the Company or of any organization or Committee representing them that going to and from the place of work should be on Company time.

Affiant further deposes that during all of the time that he has been connected with the Republic Company, he has been personally familiar and acquainted with the conditions existing at the ore mines of the Republic Company, and that he knows that during all of this time in paying men who work at the ore mines, in settling their claims for wages, in responding to garnishments and other Court actions, and in all other particulars it has been the custom and practice to consider and handle hours of work as referring to the actual hours worked by the miners at the face and by other employees at their usual working places, and to compute the hours worked for which the men are paid as the time actually spent by them at the face or at the

usual working place of the men. The time spent by the men in going to and from the portal of the mine to their face or usual working place has never at any time or under any circumstances been counted or considered as a part of the working time.

Affiant further deposes that, with the exception of the instances noted above, the first time that he ever heard of any contention being made by anyone that the time taken in transportation to and from the working place was a part of the working hours of the miners was when he learned recently that a complaint had been filed with the United States Department of Labor, Wage and Hour Division, which is now under investigation and in reference to which this affidavit is being made.

Affiant further deposes that such contention, with the exceptions noted above, was never made or suggested or brought up for discussion by any of the miners, or any of their bargaining representatives in any of the bargaining conferences and negotiations which the Company has held, or at any other time or under any other circumstances. On the contrary, affiant deposes that it has been generally and definitely understood between the Republic Company and its miners that their working hours for which they should receive compensation should be on a face to face proposition.

The facts herein deposed to in reference to the operations of the Republic Company are based on my own personal knowledge. In addition to this, from information from reliable sources which I have received from time to time, and which I believe to be true, I know that the same customs and practices set out above in connection with the Republic Company's operations have also prevailed

throughout the Birmingham, Alabama, District at the operations of the other ore and coal mining companies.

(Signed) NORMAN E. THOMPSON.

Sworn to and subscribed before me, on this the 3 day of October, 1940.

(Signed) MARGARETTE KENNEDY,
Notary Public.

Attached to this affidavit, Defendants' Exhibit No. 10, is a form of proposed contract in all respects identical with Republic Exhibit No. 9, heretofore set out.

4507 DEFENDANTS' EXHIBIT No. 29.

Tennessee Coal, Iron & Railroad Company,
Muscoda Division.

Minutes of Meeting
Held in General Superintendent E. M. Ball's Office
January 17, 1936.

Those present were:

Mr. E. M. Ball, General Superintendent,
Mr. Ewing Cater, Superintendent,
Mr. W. C. McKenzie, Acting Superintendent,
Mr. M. E. Baird, General Supt. Clerk,

and the following Committee from Muscoda Local No. 123, International Union of Mine, Mill & Smelter Workers:

Mr. B. H. Barksdale	(w)
Mr. Tom Brantley	(w)
Mr. Pete Dulaney	(w)
Derry Wilson	(c)
Louis McCreary	(c)
Walter Ward	(c)

The meeting was called to order by Mr. E. M. Ball, General Superintendent, at 4:30 P. M.

Mr. Ball:
What do you wish to see me about today?

Mr. Barksdale:
The Clyde Martin case.

Mr. Ball:
That is the case you took up with me before and I asked you to talk to Mr. Carter about it.

Mr. Barksdale:
Yes, sir, but it has not been settled.

Mr. Ball:
What is Martin doing now, Mr. Carter?

Mr. Carter:
He is a Haulage Engineer and has been getting some time as a Drag Operator when any of the regular Drag Operators on that shift are off. We expect to put on a new place next week and Martin will be given the job of Drag Operator.

Mr. Barksdale:
The men on the material handling crew are asking for a little more time. I have suggested to them that some of them ask for a transfer underground. Four of them have agreed to do this if you can use them.

Mr. Carter:
We will be able to use two of these men next week in the new place we are putting on.

Mr. Barksdale:

The men on the round timber crews claim they should get more extra time than they are getting.

Mr. Carter:

We are dividing the time as equally as possible. They are getting their part of the extra time in their regular turn.

Mr. Ball:

It has come to my attention that certain employees, whose names I will not mention at this time, have been talking about the coal being sold by the Company and the manner of delivering it. During the time of slack operations, when the employees were unable to buy coal from outside dealers, the Company made arrangements to sell coal to the employees, allowing them to pay for it through the pay roll. We made arrangements for the Bruns Transfer Company to haul this coal and they have given complete satisfaction. I think it is a very bad thing for any employee to criticize what we have done by advising other employees not to buy this coal. I want to make this clear—we don't care whether the employees buy this coal or not; we have the coal here for their benefit but if they don't want the coal they don't have to buy it.

Mr. Dulaney:

Mr. Ball, I think I can clear this up. I believe this was started by private Truck owners to get more business for themselves. I don't believe the employees are trying to get others not to buy Company coal.

Derry Wilson:

I believe the complaint is against the Truck Drivers who work for Bruns Transfer Company. Pressure has been put on the Drivers.

Mr. Barksdale:

Neither the Company or the Bruns Transfer Company is connected with this case but pressure has been put on the Drivers. I am sure this case will be settled within the next two weeks.

Mr. Ball:

There is another matter I want to mention to this Committee. For several days a number of men have been late reporting to the mines. We pay a days wage for a days work and we expect the days work. Whenever a man comes to the mine late, dragging along and encourages others to be late, he is setting a bad example. I want this understood throughly—men must be on time; we don't care whether they work here or not, but if they want to work here they will have to be on time or else they will be disciplined, even to discharge.

Mr. Barksdale:

Mr. Ball, we do not believe in the men being late for work and we will be glad to help you in this matter. Why not blow the whistle at night the same as in the morning?

Mr. Ball:

Beginning Sunday night the whistle will blow at 6:00, 6:20 and 6:30. The morning whistles will be blown at 6:00, 6:20 and 6:30.

The meeting adjourned at 5:30 P. M.

B. H. BARKSDALE,
For the Committee.

E. M. BALL,
General Superintendent.

4510 T. C. I. EXHIBIT No. 32.

Bessemer, Alabama, August 9, 1933.

Tennessee Coal, Iron & Railroad Company, Birmingham, Alabama,

Woodward Iron Company, Woodward, Alabama,

Republic Steel Corporation, Birmingham, Alabama,

Sloss-Sheffield Steel & Iron Company, Birmingham, Alabama.

Gentlemen:

In order to support our President in his efforts to restore the Nation's prosperity and reduce unemployment, we believe the hours of labor in industry should be reduced to a maximum of 35 hours per week, and that the minimum weekly pay should be $14.50 for common labor as provided by the Blanket Code approved by President Roosevelt.

The Bessemer District Smelters Council of the International Union of Mine, Mill and Smelter Workers, affiliated to the American Federation of Labor, and composed of a representative number of your employees in mines and plants, pledge our patriotic support and cooperation in carrying out in every way possible the spirit, purpose and intent of the National Recovery Act. Therefore, through our chosen representatives, we are available to meet with you for the purpose of discussing wages, hours and other conditions promulgated under the President's Blanket Code in order that more men may be put to work as early as possible.

We hope this will receive your immediate attention and careful consideration.

THE BESSEMER DISTRICT
SMELTERS COUNCIL,
(Signed) C. L. PEGUES,
Secretary.

Copies to—

Franklin D. Roosevelt, President of the United States.

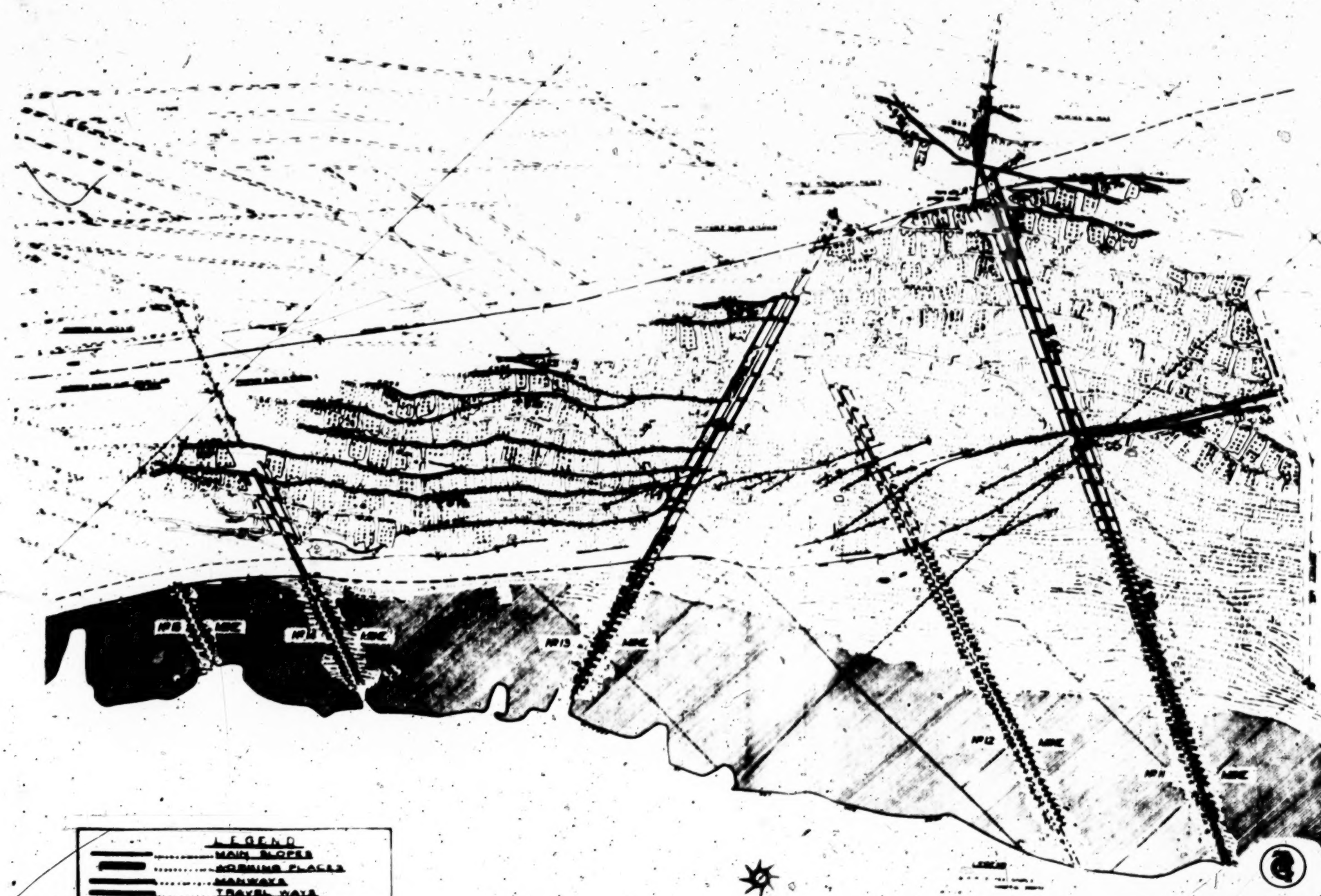
Hugh S. Johnson, Administrator, Industrial Recovery Act.

William Green, President, American Federation of Labor.

Plant & Mine Superintendents of respective Companies.

International Union of Mine, Mill & Smelters Workers.

DEFENDANT'S EXHIBIT NO: 30

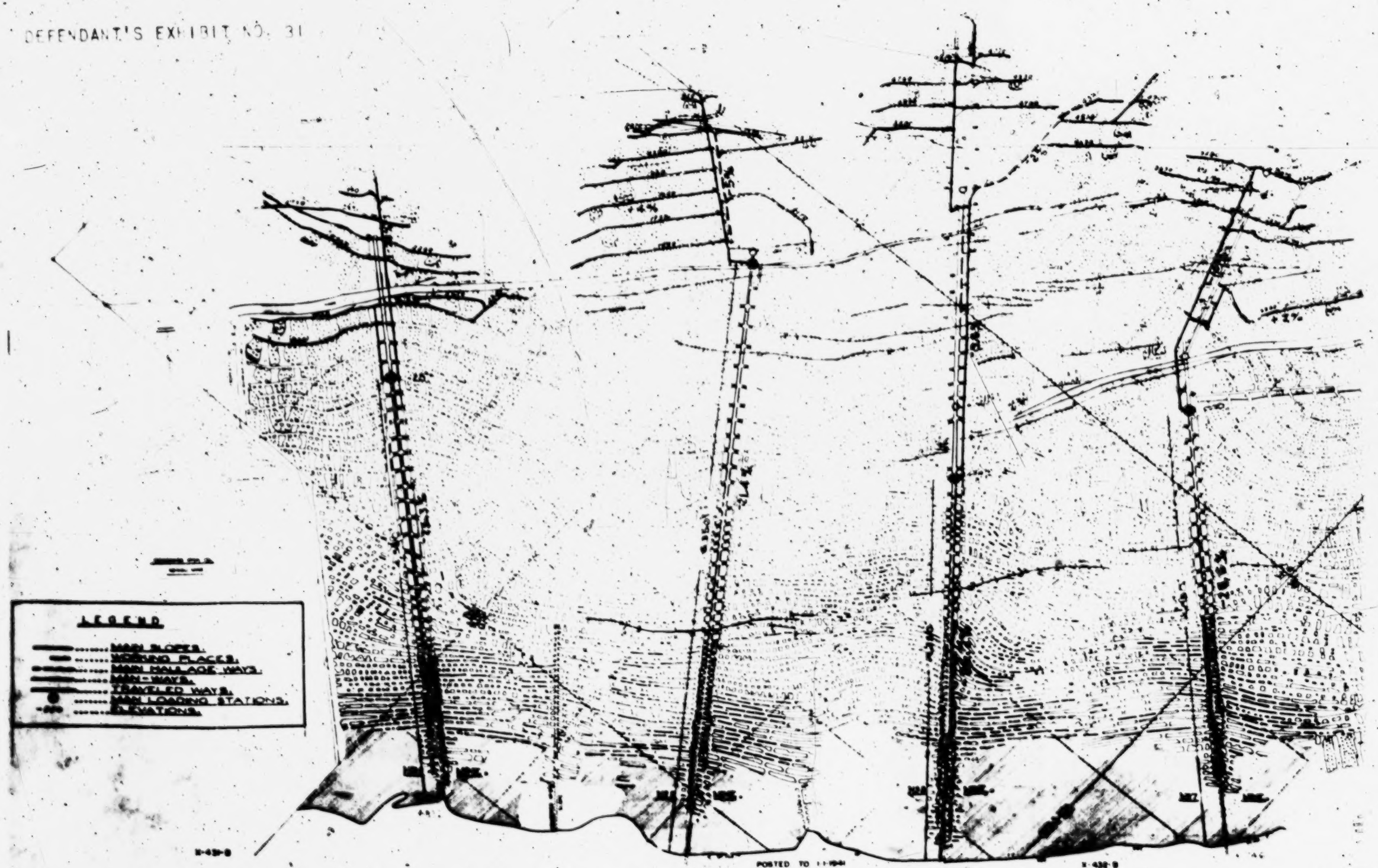


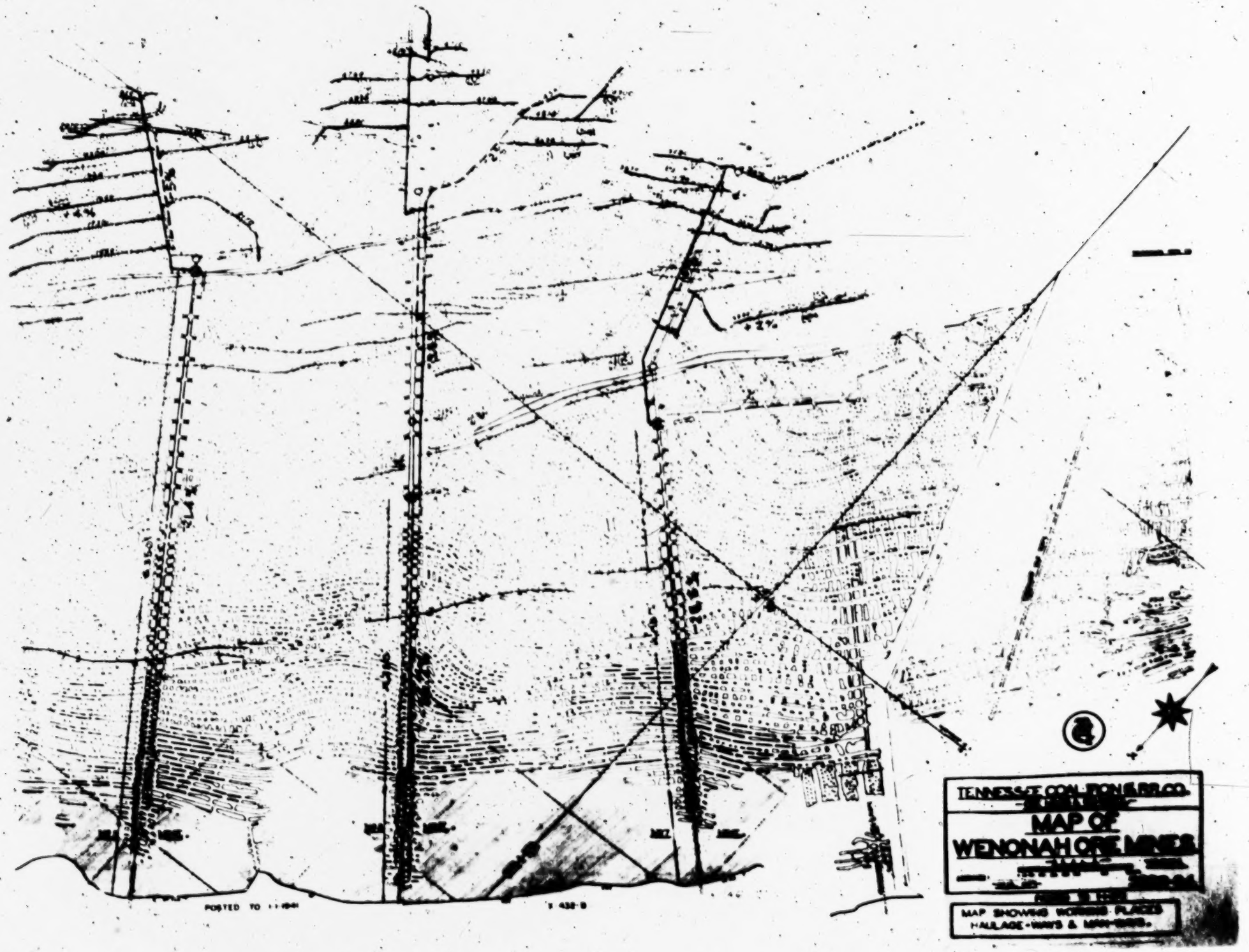
ISUKODA IRON MINES.

POSITED TO [illegible]

[illegible] WING WORKING PLACES HAULAGE – [illegible] MANWAYS

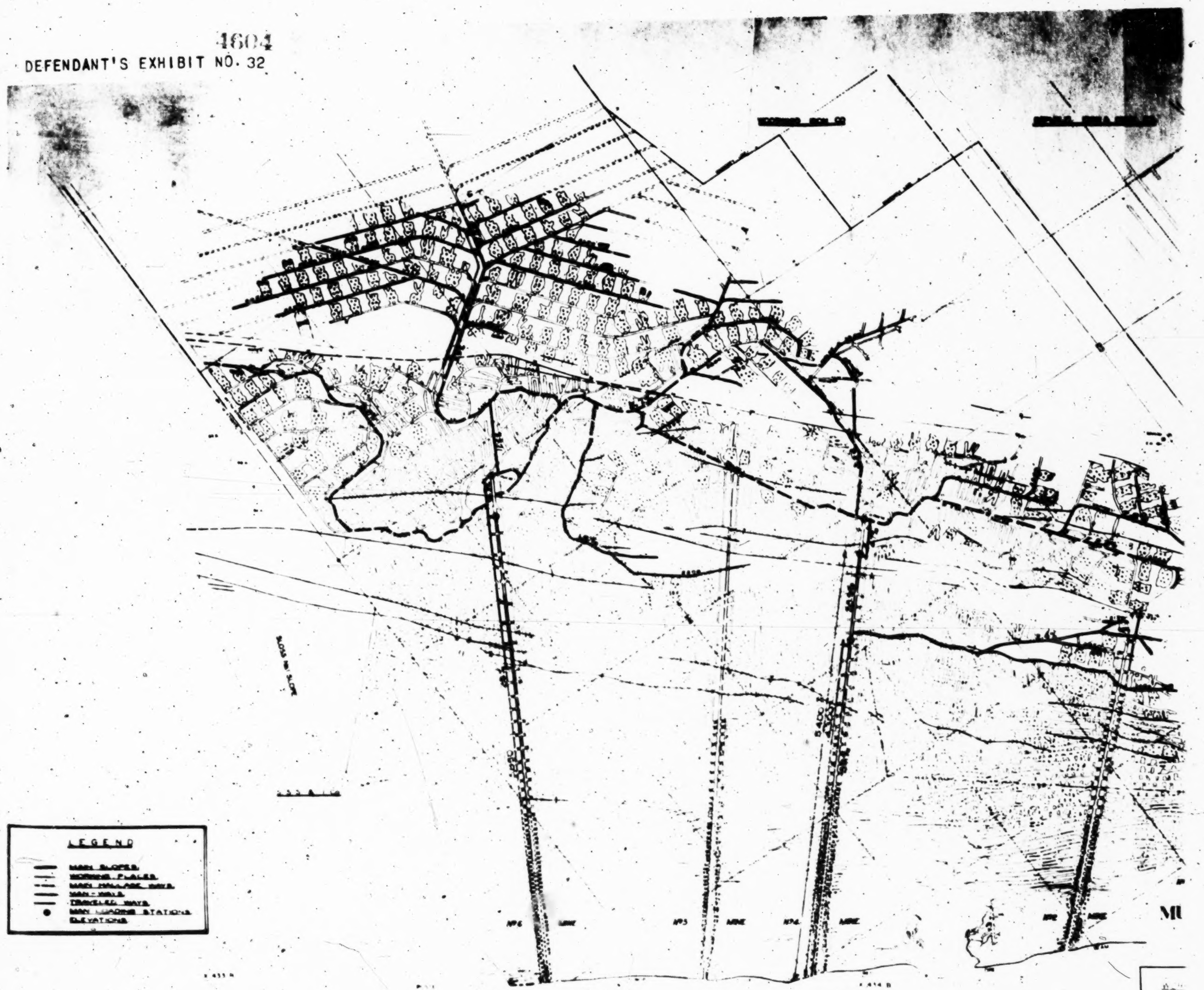
DEFENDANT'S EXHIBIT NO. 31

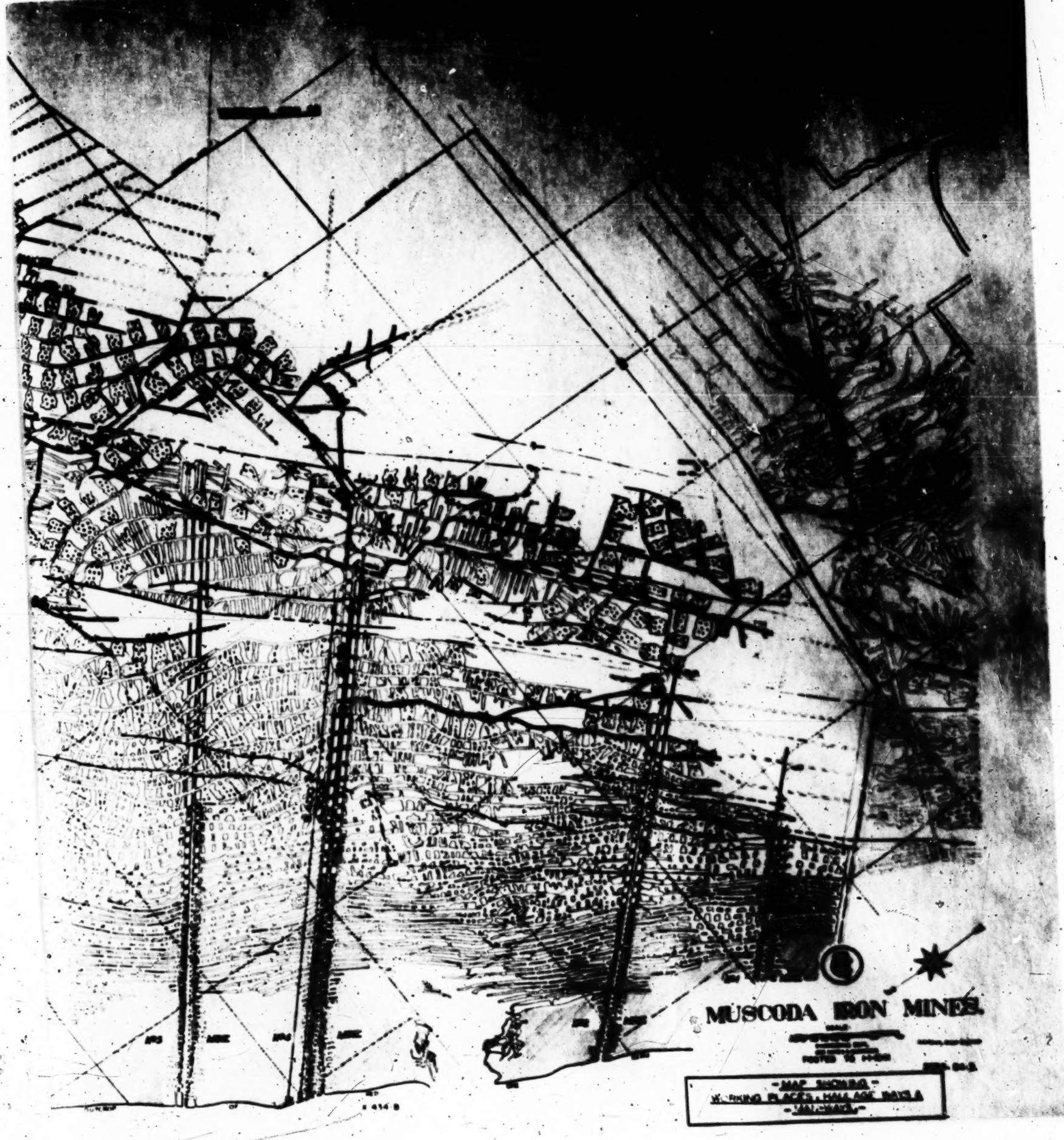



TENNESSEE COAL IRON & RR CO.
MAP OF
WENONAH ORE MINES
MAP SHOWING WORKING PLACES
HAULAGE-WAYS & MAN-WAYS.

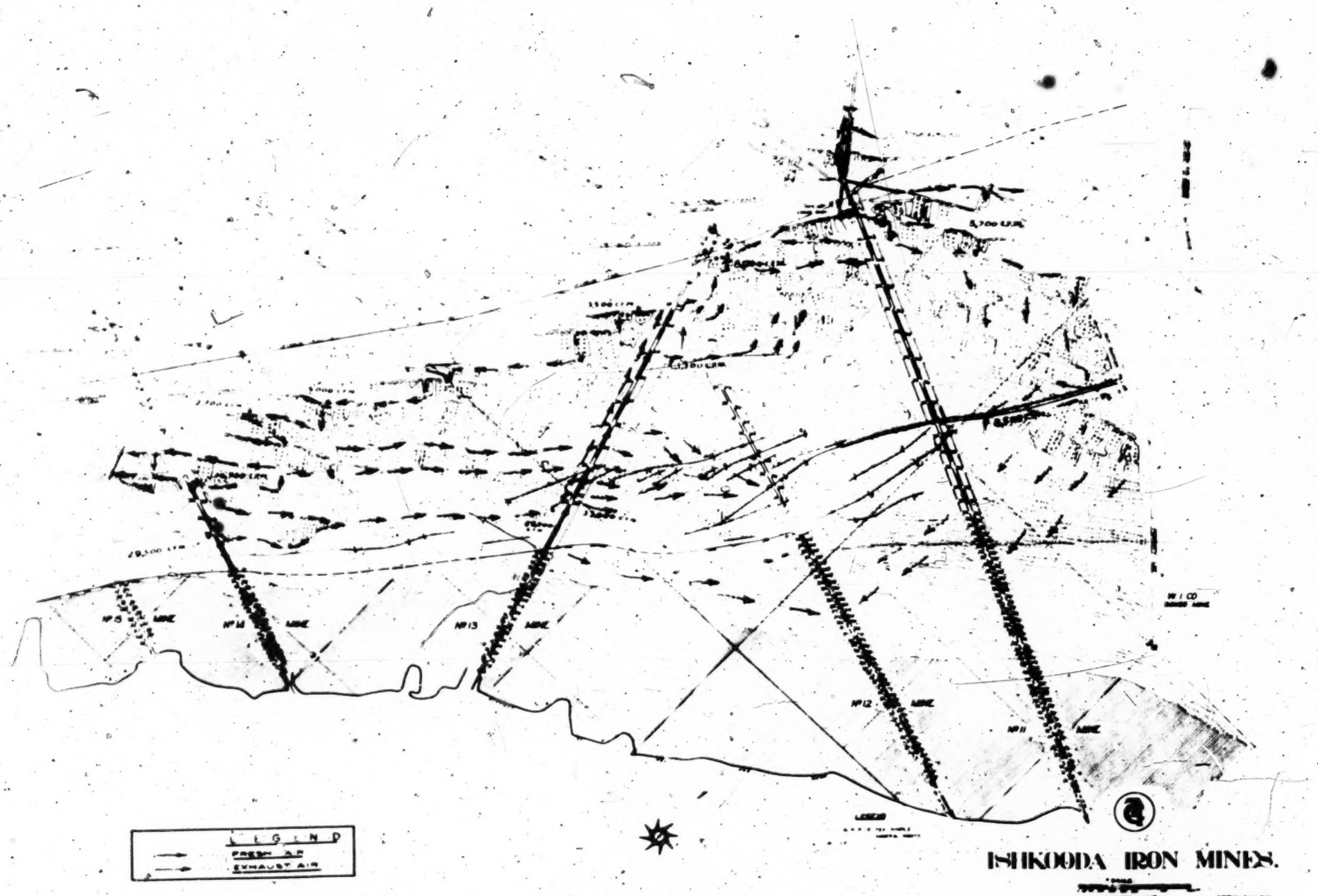
1604

DEFENDANT'S EXHIBIT NO. 32




MUSCODA IRON MINES
- MAP SHOWING -
W. RHINO PLACER, HALLADE PATENT
- VANCOUVER -

DEFENDANT'S EXHIBIT NO. 33



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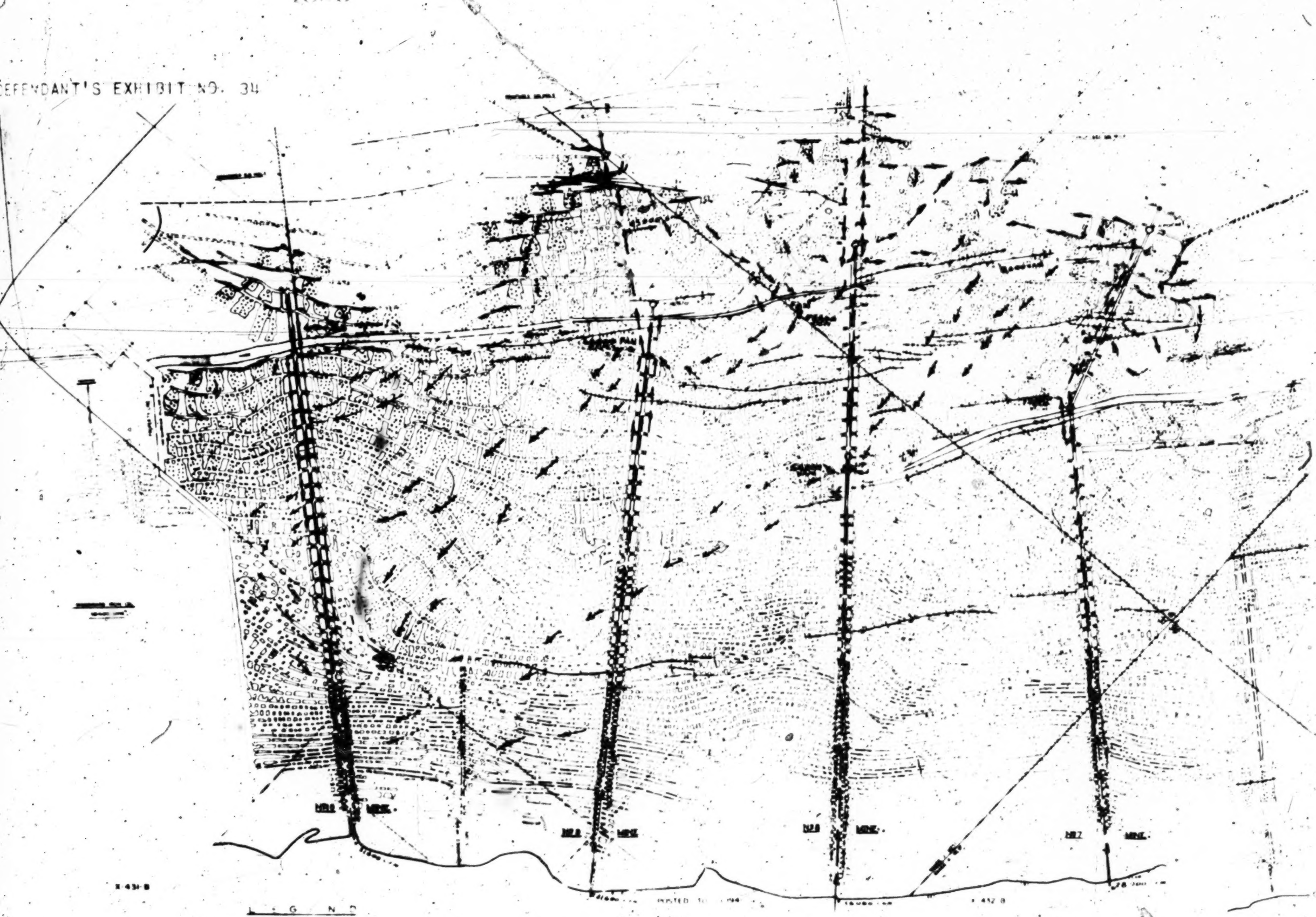
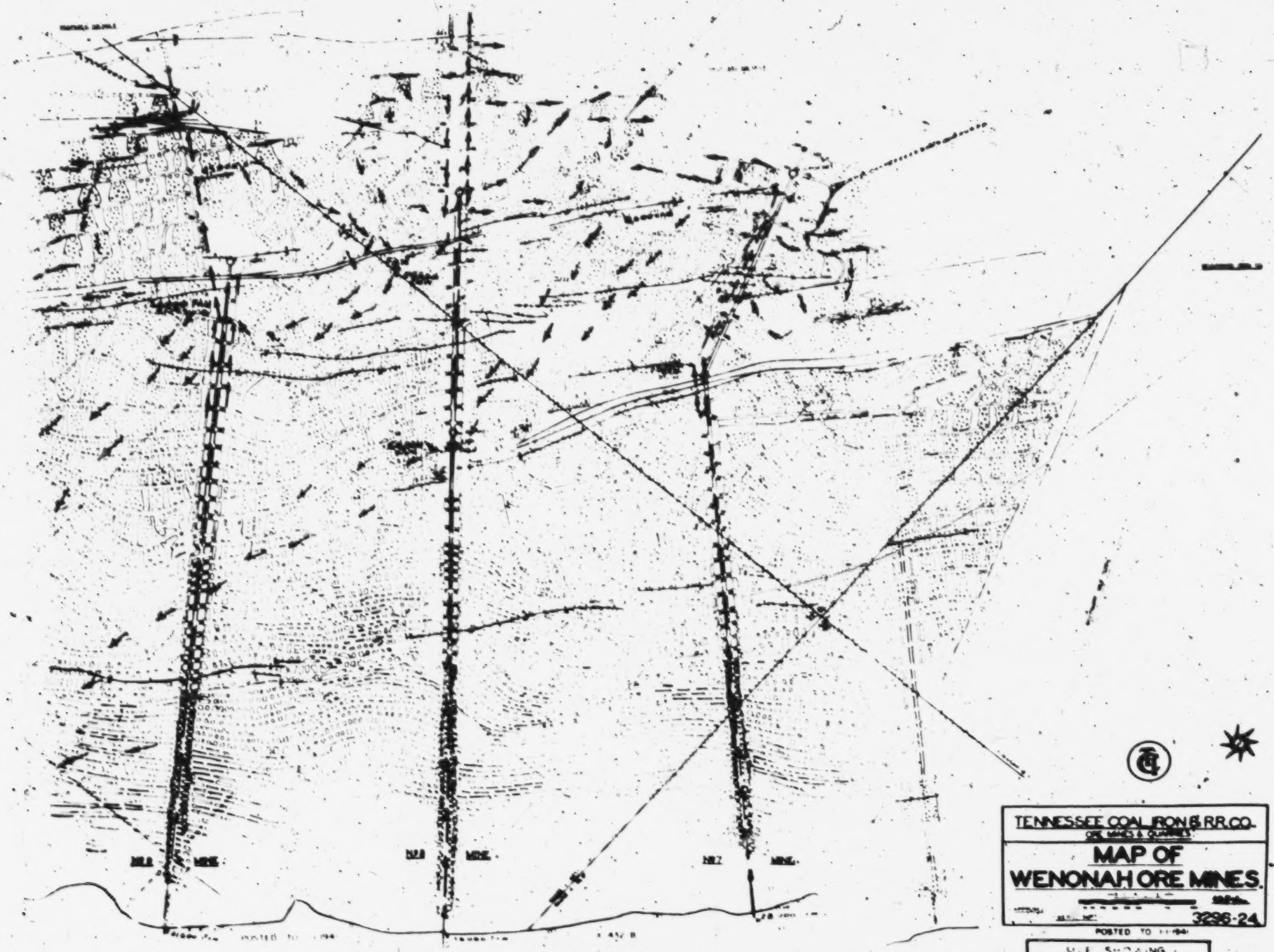




TENNESSEE COAL IRON & R.R. CO.
ORE MINES & QUARRIES

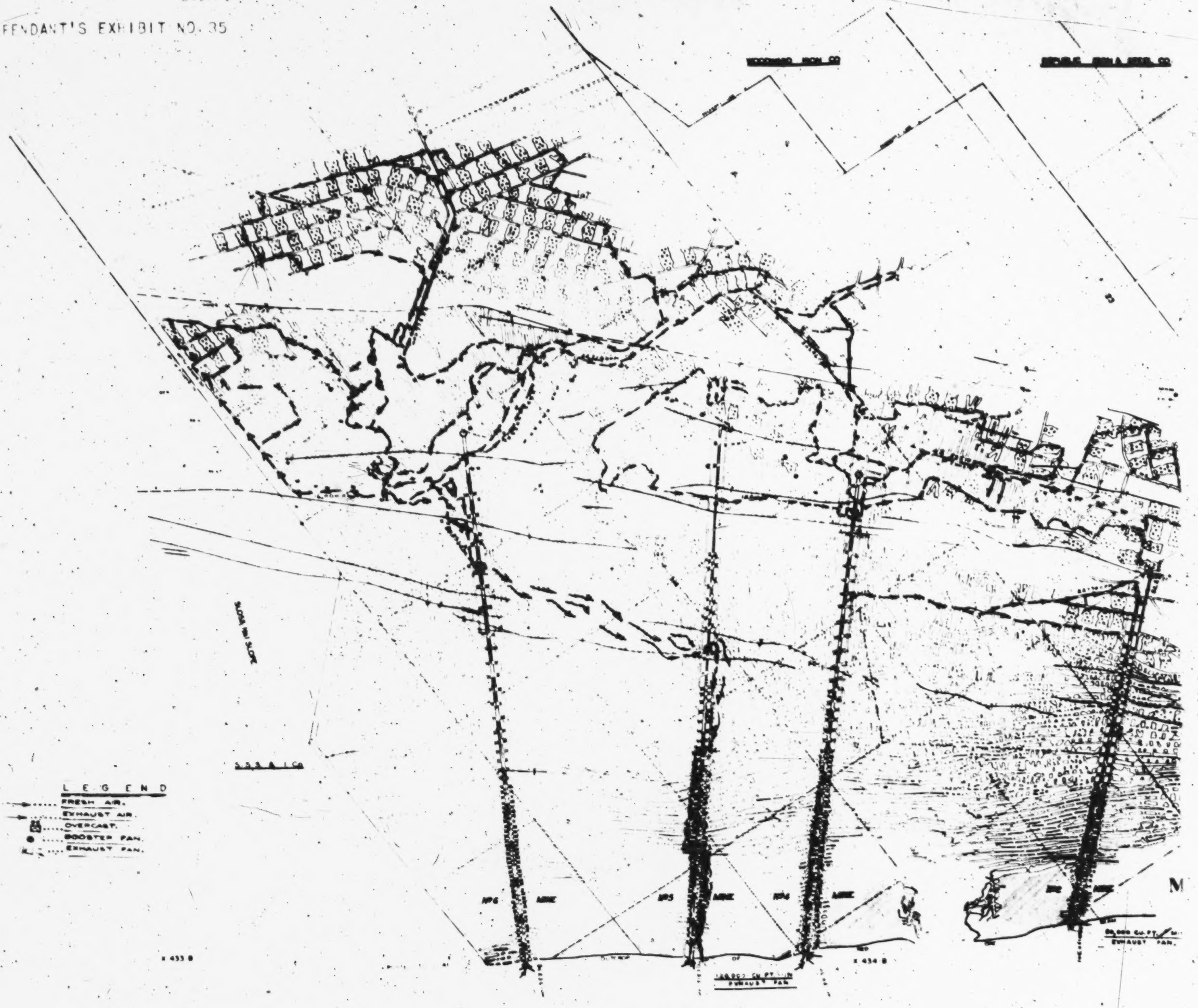
MAP OF WENONAH ORE MINES.

3296-24

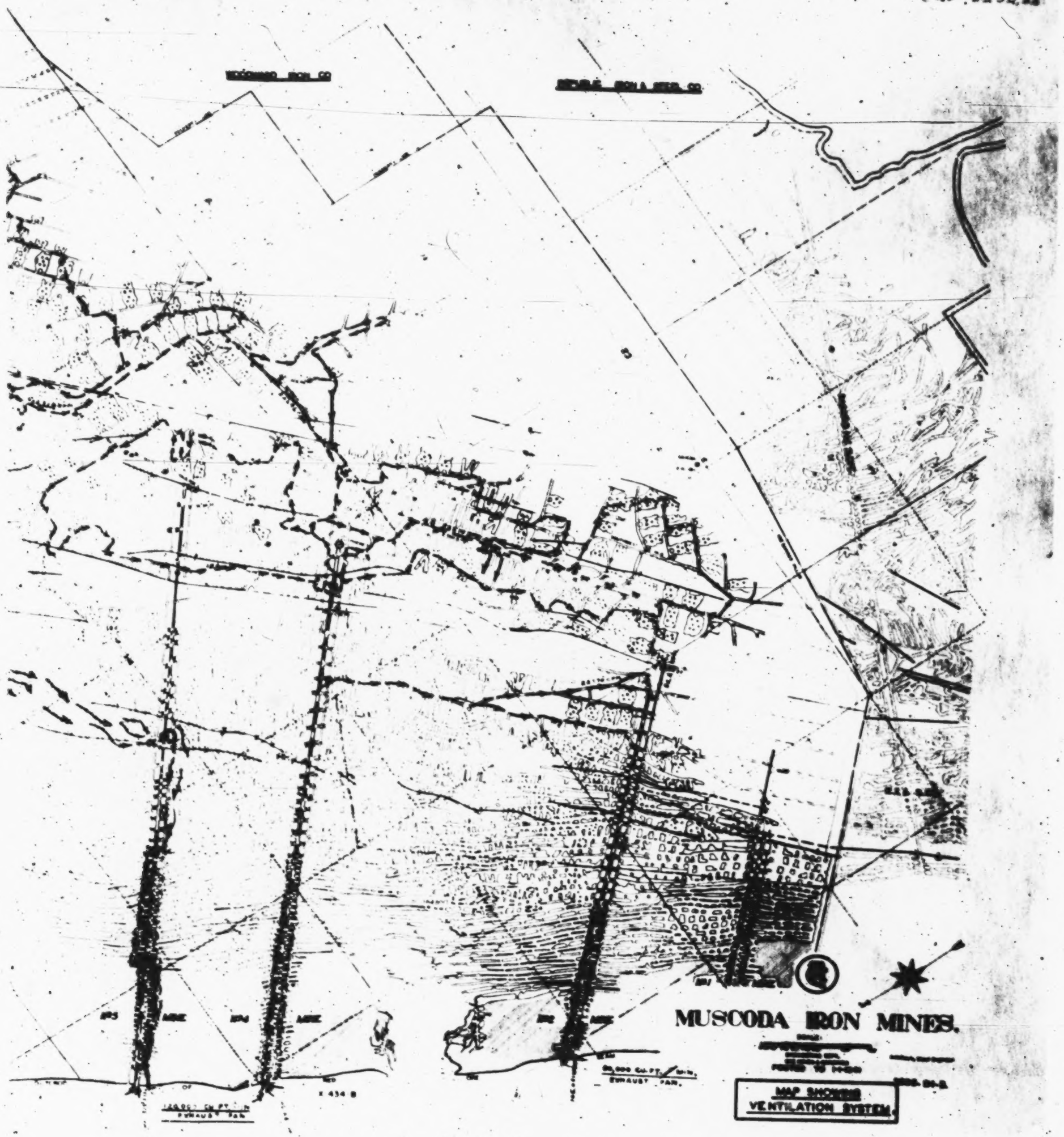
POSTED TO

U.S. SURVEYING
TRIANGULATION SYSTEM

DEFENDANT'S EXHIBIT NO. 35



Bull. U.S. 935
(Vol. 1952-32, pt. 6)



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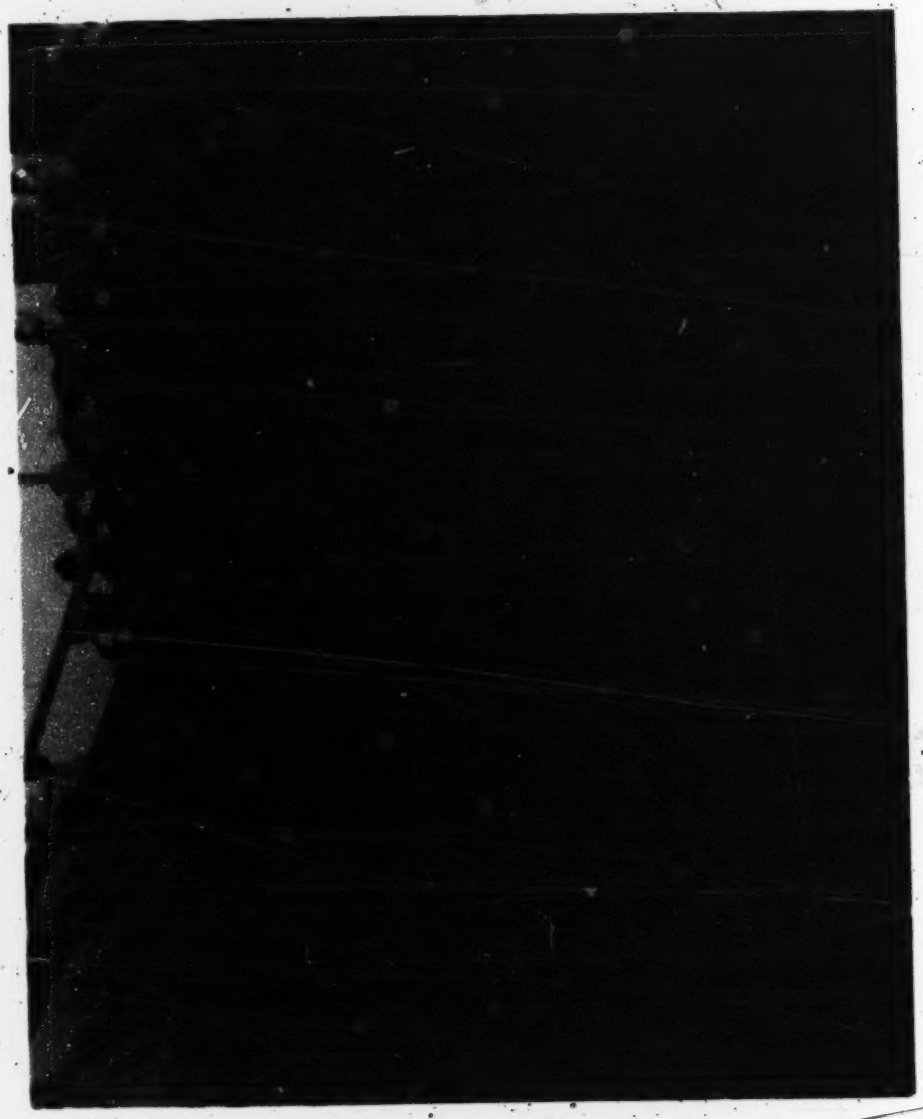
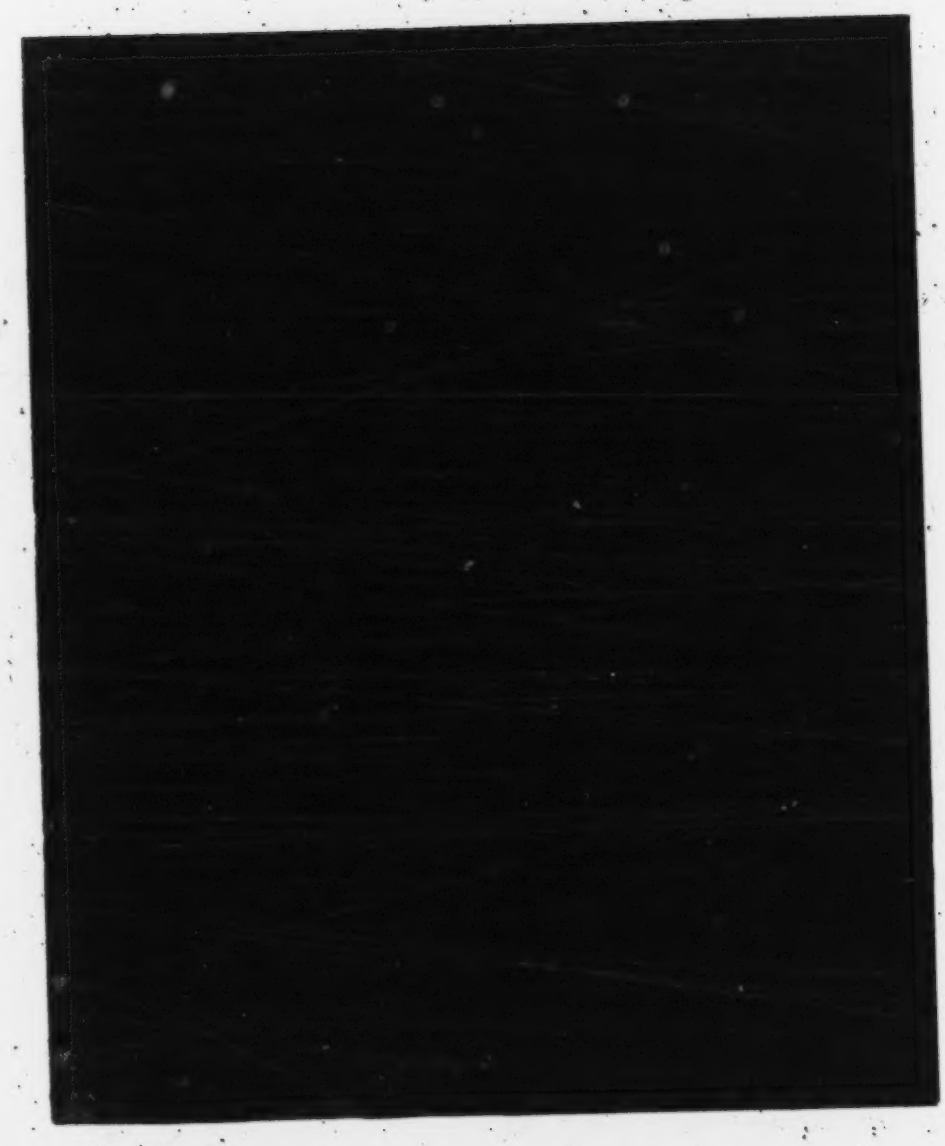


T. C. I. EXHIBIT NO. 34

T. C. I. EXHIBIT NO. 35

T. C. I. EXHIBIT NO. 36

T. C. I. EXHIBIT NO. 37



T. C. I. EXHIBIT NO. 38

T. C. I. EXHIBIT NO. 39

SLOSS EXHIBIT NO. 43

8

SLOSS EXHIBIT NO. 44

SLOSS EXHIBIT NO. 45

SLOSS EXHIBIT NO. 46

SLOSS EXHIBIT NO. 47

SLOSS EXHIBIT NO. 48

SLOSS EXHIBIT NO. 49

SLOSS EXHIBIT NO. 50

4532 SLOSS EXHIBIT No. 51.

Sloss Exhibit No. 51 is in all respects identical with Exhibit "C" to the Petitioner of Petitioner-Plaintiff Sloss-Sheffield Steel & Iron Company, heretofore set out. (Record, p. 146.)

4533 REPUBLIC EXHIBIT #20.

Republic Steel Corporation.

List of Underground Occupations.

(May 1st, 1941, and Prior Thereto.)

Raimund	Spaulding
Drill Sharpener	Electrician
Drill Sharpener Helper	Electrician Helper, 1st Class
Welder and Burner	Electrician Helper, 2nd Class
Electrical Foreman	Welder & Burner
Electrician	Mine Foreman
Electrician Helper, 1st Class	Pipeman
Electrician Helper, 2nd Class	Skip Loader
Mine Foreman	Motorman
Section Foreman	Car Coupler
Powderman	Chainer
Weighman	Track Foreman
Material & Slope Track Man	Track Labor
Slope Track Labor	Pumpman
Material Helper	Hoist Operator (large)
Car Repairman, 1st Class	Hoist Operator (small)
Car Repairman, 2nd Class	Ore Storage Pocketman
Car Repairman Helper	Diamond Drillman
Pipeman	Diamond Drill Helper
Skip Loader	Underground Helper

Raimund

Motorman
Car Coupler
Chainer, 1st Class
Chainer, 2nd Class
Track & Timber Foreman
Track & Timber Laborer
Bratticeman
Bratticeman Helper
Salvageman
Salvage Labor
Slate Picker
Pumpman
Hoist Operator (Large)
Hoist Operator (Small)
Driller (Company Work)
Contractor (Company Work)
Underground Helper
Drill Repairman
Drill Repairman Helper
Slate Man
Slate Man Helper
Roller Repairman & Greaser
Drag Operator
Contractor
Mucker
Mucker, 45° Slope
Stope Neck Contractor
Drag Contractor
Drag Hoistman
Drag Driller
Drag Drill Helper
Drag Mucker

Spaulding

Rampman
Ramp Helper
Drag Contractor
Drag Hoistman
Drag Driller
Drag Drill Helper
Drag Labor
Shovel Contractor
Shovel Operator
Shovel Driller
Shovel Drill Helper
Shovel Labor
Buggy Operator

4534 PLAINTIFFS' EXHIBIT No. 51.

This Agreement, dated May 5, 1941, (hereinafter referred to as the "1941 Agreement") is between Tennessee Coal, Iron and Railroad Company (hereinafter referred to as the "Company") and the International Union of Mine, Mill & Smelter Workers, (hereinafter referred to as the "Union") on behalf of its members employed by the Company in its ore and limestone mines located at Muscoda, Wenonah, and Ishkooda, and in its Sintering Plant at Wenonah, Jefferson County, Alabama.

Section 1. It is the intent and purpose of the parties hereto to set forth herein the basic Agreement covering rates of pay, hours of work and conditions of employment to be observed between the parties hereto.

It is understood and agreed that this Agreement pertains only to members of the Union employed in the ore and limestone mines of the Company located at Muscoda, Wenonah, and Ishkooda, and in its Sintering Plant at Wenonah, Jefferson County, Alabama.

The term "employee," as used in this Agreement, applies only to members of the Union and shall not include Foremen, Assistant Foremen or Supervisors in charge of any classes of labor, or Watchmen, Guards, Clerical or Salaried employees. A list of the positions excluded by this section will be provided the Union at each mining division of the Company within sixty (60) days of the effective date of this Agreement. Any dispute in regard to such list may be subject to adjustment in accordance with provisions of Section 8.

Section 2—Recognition. The Company recognizes the Union as the collective bargaining agency for those em-

ployees of the Company who are members of the Union. The Company recognizes and will not interfere with the right of its employees to become members of the Union. There shall be no discrimination, interference, restraint or coercion by the Company or any of its agents against any members because of membership in the Union. The Union agrees not to intimidate or coerce employees into membership and also not to solicit membership on Company time or plant property.

Section 3—Wages. Effective April 1, 1941, there shall be an increase in wages of ten (10c) cents an hour on all rates which are at present Three Dollars and Sixty cents ($3.60) a day, or a minimum for this classification of Four Dollars and Forty Cents ($4.40) a day of eight (8) hours. Such classifications now receiving less than Three Dollars and Sixty Cents ($3.60) a day or less than forty-five cents per hour, shall be increased ten (10c) cents per hour. There shall be an increase of ten (10c) cents per hour in all other hourly rates, and an equivalent increase in all tonnage and piece-work rates which will result in an increase of eighty (80c) cents per day of eight (8) hours. Occupational hourly rates now in effect and as increased as above provided shall remain in effect for the duration of this Agreement, except as changed in accordance with the provisions of Section 12 hereof; but the incentive rate shall be adjusted in connection with the March 23, 1941, opinion rendered by the Administrator of the Wage and Hour Division of the Department of Labor concerning "hours worked" in underground metal mining to be effective May 1, 1941. The adjusted incentive rate shall remain in effect, except as changed in accordance with the provisions of Section 12 hereof, until the Company shall determine (whether on the basis of judicial determination, amendment of the law, or otherwise) to return to a working day computed upon hours of work in and about the mines at the usual working places, in which event the incentive rate in

effect on April 30, 1941, shall again become effective. It is expressly understood that the union does not hereby waive any rights which its members may have to proceed against the Company under the Fair Labor Standards Act in such event.

Section 4—Hours Of Work.

a. This section is intended only to provide a basis for calculating overtime and shall not be construed as a guarantee of hours of work per day or per week.

b. The normal hours of work shall be eight (8) per day and forty (40) per week. The daily hours of work shall be consecutive except for such rest periods as may be provided in accordance with practices heretofore prevailing in the ore and limestone mines of the Company.

c. The eight (8) hour day means eight hours of work in or about the mines at the usual working places for all classes of labor, exclusive of the lunch or rest periods as provided for in (b) above, whether they be paid for the day or be paid on the tonnage basis, less such traveling time as is reasonably necessary for the employees to go to and from their usual working place, such traveling time starting when the employee is required to report for transportation at the entrance of the mine and ending when he returns to that point.

It is understood that the above inclusion as a part of the day's work of the traveling time reasonably necessary for the employee to go to and from his usual working place has been herein agreed to by the Company in compliance with the opinion rendered by the Administrator of the Wage and Hour Division of the Department of Labor, which becomes effective on May 1, 1941. The Company denies the correctness of said opinion. Suits are now pend-

ing for the judicial determination of this question. It is, therefore, agreed that if and when there is a final judicial interpretation (this agreement then being in existence) overlying or modifying the opinion f the administrator or in the event the Administrator changes his opinion or the law is amended, the question of whether or not the definition of the workday herein agreed to shall thereupon be changed so as to comply with the court's decision or the law as interpreted or amended shall immediately become a question for negotiation, and, if not settled between the parties by such negotiation within thirty (30) days after such final judicial interpretation or change or amendment has occurred, neither of the parties hereto shall be further bound or obligated by the definition of the day's work as herein contained, and the parties shall proceed as hereinafter provided for in Section 15 hereof.

d. Hours worked in excess of eight (8) consecutive working hours or in excess of a total of forty (40) in a work week, or days worked in excess of five (5) work days within the work week shall be paid for at one and one-half times the normal rate of pay. The work week shall be any seven (7) consecutive days. It is the intention of management wherever and whenever practicable, consistent with blast furnace raw material requirements and other operating conditions, to schedule employees so as to permit as many employees as is practicable to have a forty-eight (48) hour continuous rest period within any work week based upon these conditions. Overtime payment shall be made on the basis of either daily or weekly overtime hours worked, but an employee shall not be paid both daily and weekly overtime for the same overtime hours worked. By mutual agreement between the mine grievance committee and local mine management, employees who fail to complete the average hours worked in the mine in which they are employed up to forty hours in the five work days within the work week, may be permitted, if

work is available in the mine in which they are regularly employed to make up time lost on the sixth or seventh day within the work week up to a maximum of forty hours at their regular rates of pay without the payment of overtime.

e. Employees who are regularly scheduled or who are notified to report and who do report for work shall be paid, in the event no work for which they were scheduled is available, for two hours work at the occupational rate of the occupation at which they were scheduled or for which they were notified to report. At management's discretion the employees scheduled or notified to report may be assigned to other substantially similar work for which they may be qualified in lieu of their being released. If employees refuse such assignment, they shall not receive the two hours reporting pay. Employees who are scheduled and report and actually begin work at the start of a turn and work less than four hours shall be paid for a minimum of four hours. At Management's discretion they may be offered other work beyond the four-hour period. If employees refuse such other work, they shall not receive more than the minimum four hours' pay or minimum four hours' work. The foregoing payments shall be either at the regular or overtime rates depending upon whichever pertains in accordance with the provisions of this section. In the event the job for which the employees have reported for work or on which they have worked is regularly paid on an incentive basis the regular pay shall be based on average hourly earnings for the turn or pay period or the guaranteed occupational rate whichever is the greater. Employees assigned to other work and who accept same shall be paid for the actual hours worked at the rate of pay for the job to which they have been assigned. In the event of strikes, stoppages in connection with labor disputes, breakdowns of equipment or acts of God shall interfere with work being provided, the provisions of this paragraph (e) do not apply.

Section 5—Irregular Work. When an employee absents himself from his work for a period of two days without the consent of the Company, other than because of proven sickness or a satisfactory explanation, he may be suspended or discharged. When any employee makes a habit of laying off for single days other than because of proven sickness and continues to do so after having been warned by the Company he shall be subject to suspension or discharge in accordance with the provisions of Section 10 hereof.

Section 6—Vacations. Each employee who, prior to July 1, 1941, and each subsequent calendar year during the continuance of this Agreement, has been continuously in the employ of the Company for three or more years shall receive one (1) week's vacation with pay, and each employee who has been continuously in the employ of the Company for fifteen (15) or more years shall receive two (2) weeks' vacation with pay.

A one (1) week's vacation shall consist of seven (7) consecutive days and a two (2) weeks' vacation of fourteen (14) consecutive days.

Continuous service shall be determined by the employee's first employment in any mine or plant of the Company and in accordance with the provisions for determination of continuous service as set forth under Section 7 hereof.

Vacations will, so far as possible, be granted at times most desired by employees, but the final right to allotment of vacation period is exclusively reserved to the Company in order to insure the orderly operation of the mines.

Employees granted vacations will be paid on their average rate of earnings per hour for the two (2) pay periods closed and calculated immediately peceding their vaca-

tion period. If the employee did not work in the two (2) pay periods immediately preceding his vacation period, he shall be paid on the basis of the last two (2) pay periods worked which were closed and calculated preceding the vacation date. Total hours of vacation pay will be the average hours worked by the employees granted the vacation during the two (2) closed and calculated pay periods but not less than forty (40) hours per week nor more than forty-eight (48) hours per week.

It is agreed that the intent of this section is to provide vacations to eligible employees who have been consistently employed. Consistent employment shall be construed to mean the receipt of earnings in at least 60% of the pay periods within the period intervening between July 1 of each calendar year.

Notwithstanding the employee's accumulation of three or more years' continuous service and his eligibility therefor for vacation, the above requirement of earnings in at least 60% of the pay periods shall be required in addition to such service eligibility.

If, in the opinion of Management, this vacation program would interfere with the attainment of maximum production and the expedition of the National Defense Program, at the option of the Company any eligible employee may be required to continue work and receive a vacation pay as above provided in lieu of actual vacation from work. However, it is the intent that to the greatest degree possible in Management's judgment, eligible employees shall receive the benefit of vacation from work.

Section 7—Seniority. It is understood and agreed that in all cases of:

1. Promotion—the following factors shall be considered, and where factors "b", "c", and "d" are relatively equal, length of continuous service shall govern:

a. Continuous service;

b. Ability to perform the work;

c. Physical fitness;

d. Place of Employment;

2. Increase or decrease of forces—the following factors shall be considered and where factors "b", "c", "d" and "e" are relatively equal, length of continuous service shall govern:

a. Continuous service;

b. Ability to perform the work;

c. Physical fitness;

d. Family status; number of dependents;

e. Place of Employment.

It is agreed that the computation of length of continuous service shall be based on the United States Steel and Carnegie Pension Fund Rules for service continuity for all service up to and including March 31, 1941, which service shall be the total accumulated service as of that date and as provided under the Pension Fund Rules referred to above. Effective April 1, 1941, length of continuous service shall be calculated from that date or from subsequent date of hiring in accordance with the following provisions:

(1) There shall be no deduction for any time lost which does not constitute a break in continuity of service. Continuous service is broken by (a) voluntarily quitting the service, (b) absence due to discharge, termination, suspension or leave of absence, any of which continues for more than six (6) months or (c) absence due either to layoff or to disability or both which continues for more than two years; provided, however, that employees injured while on duty shall accumulate credit for continuous service until the termination of the period for which statutory compensation is payable. New employees and those hired after a break in continuity of service will be regarded as probationary employees for the first six (6) months of their employment and will receive no continuous service credit during such period. During this period of probationary employment, probationary employees may be laid off or discharged as exclusively determined by Management provided that this provision will not be used for purposes of discrimination because of membership in the Union. Probationary employees continued in the service of the Company subsequent to six (6) months from date of original hiring shall receive full continuous service credit from date of original hiring.

Section 8—Adjustment of Grievances. Should differences arise between the Company and the Union as to the meaning and application of the provisions of this Agreement, or should any local trouble of any kind arise in any mining division, there shall be no suspension of work on account of such differences but an earnest effort shall be made to settle such differences immediately in the following manner.

It is understood and agreed that the procedural steps 1, 2 and 3 for the settlement of grievances represent a general standard which may be modified where mine management functions would make more appropriate, meetings

with other supervisors than those indicated herein and such modifications as may be jointly agreed upon between the Management of the Mining Division and the Union and with respect to any mine or mines of the Company shall be set forth in writing and constitute, so far as the mine or mines involved, a supplement to this Agreement. Any such modifications shall represent a procedure best suited to the mine or mines involved for the purpose of orderly and expeditious settlement of grievances.

1. The employee who believes he has suffered a grievance shall discuss the alleged grievance with his foreman in an attempt to settle same. The foreman shall, if requested by the aggrieved employee, arrange for the presence of the Union grievance committeeman and his participation in the discussion.

2. Grievances not adjusted by the foreman shall be reduced to writing on forms provided by the Company, dated and signed by the employee involved and two copies given to the foreman. The foreman will have inserted in the appropriate place on the form his disposition of the matter and will sign and date same, returning one copy to the employee. Such grievances shall then be discussed in an attempt of settlement between the member of the grievance committee designated by the Union for the mining division involved and the foreman and or superintendent of the mining division, and such discussion and disposition thereof shall occur not more than nine (9) work days subsequent to the date of the written grievance presentation. Notation of disposition in this step shall be recorded on the employees' and the superintendents' copies of the grievance form.

3. Grievances not settled in Step 2 above shall be discussed promptly at a mutually satisfactory time but not later than the first succeeding regular meeting which shall

be held not less than once each month (unless by agreement between the Grievance Committee and mine management no monthly meeting is required) between the general superintendent of the mines and the Grievance Committee for the Mining Division.

Grievances to be discussed at such regular monthly meetings shall be entered on agenda forms by the Grievance Committee and the Management, and copies of such forms shall be exchanged between the Management and Committee and the Committee and the Management three days before such meeting. No grievances not entered on such agenda shall be discussed at such meetings except by mutual agreement. Grievances on the agenda not previously discussed in Steps 1 and 2 hereof shall be referred back for such discussion unless the grievances relate to matters general in character which cannot be settled by individual foremen or mine superintendents.

Union grievances to be discussed at regular monthly meetings may be fully investigated by a member of the Grievance Committee who shall be afforded such time off without pay as may be necessary for purposes of such complete investigation, which time off shall occur between the date of filing of the grievance in Step 2 hereof and its discussion at the meeting herein referred to.

Grievances discussed in such meetings under this section and not settled at such meetings shall be answered in writing by mine management not later than one week prior to the date of the next regular monthly meeting unless by mutual agreement, recorded in the minutes of the meeting, a different date for disposition is agreed upon.

Grievances not appealed from the decision rendered in writing in any of the three steps specified hereinabove, within ten (10) working days from the date of such deci-

sion, shall be considered settled on the basis of the decision last made and shall not be eligible for further appeal.

Minutes of all Step 3 grievance meetings shall be prepared by the General Superintendent of the Mines, jointly signed by the Chairman or Secretary of the grievance committee and the General Superintendent, and two copies of such minutes shall be handed the committee not later than ten (10) working days following the day on which the meeting was held. Minutes shall be typed and shall conform essentially to the following outline:

a. Date and place of meeting;

b. Names and positions of those present and those absent;

c. Identifying number and description of each grievance discussed;

d. Brief statement of Union position;

e. Brief statement of Company position;

f. Abstract of important aspects of the discussion;

g. Decision reached;

h. Statement of concurrence in or exceptions taken to decisions;

i. Statement as to whether decision accepted or rejected.

4. Grievances not settled in Steps 1, 2, or 3 hereof shall be dscussed in an attempt to reach a mutually satisfactory settlement between a representative of the national

union, certified to the Management in writing as the representative selected by the Union for such purpose, and a representative of the Company similarly certified by the Company to the Union in writing as its accredited representative for such purpose.

Notice of appeal to Step 4 shall be served by either party on the other in writing prior to the expiration of ten (10) work days following disposition of the grievance in Step 3 hereof. Such notice shall state subject matter of grievance, identifying number and statement of objections taken by either party to previous disposition. Either party may request a further statement of facts to be made available not later than three (3) days preceding the date set for the Step 4 meeting.

Either party may produce persons who, being familiar with the facts involved, may aid in a solution of the problem.

The number of meetings required in Step 4 to reach a satisfactory conclusion shall be determined jointly between the representative of the Company and the representative of the Union.

Minutes in form essentially similar to those specified in Step 3 hereof shall be prepared of Step 4 proceedings and made available by the Company to the Union in duplicate within ten (10) working days following the final Step 4 meeting.

5. Grievances not satisfactorily settled in Step 4 shall, in the absence of mutual agreement in writing to the contrary, be appealed to an impartial umpire to be appointed by mutual agreement of the parties hereto. The decision of the umpire shall be final. The expense and salary inci-

dent to the services of the umpire shall be shared equally by the Company and the Union.

The Grievance Committee for each mining division shall consist of not less than three employees of that mining division, and not more than six (6) such employees, designated by the Union, who will be afforded such time off, without pay, as may be required:

1. To attend regularly scheduled committee meetings;

2. To attend meetings pertaining to discharges or other matters which cannot reasonably be delayed until the time of the next regular meeting, and

3. To visit departments other than his own at all reasonable times for the purpose of transacting the legitimate business of the Grievance Committee after notice to the head of the department to be visited and permission from his own mine Superintendent or the Superintendent's designated representative.

The actual number of members of the Grievance Committee at each mining division shall be mutually agreed upon between the General Superintendent or Manager of the mining Division and the Union.

Suitable identifying and numbering systems for grievances shall be adopted by mutual agreement in each Mining Division.

Awards or settlement of grievances shall, in no case, be made retroactive beyond the date on which the grievance was first presented in writing form, in Step 2 of the procedure, except as provided in Section 10 (Discharge Cases) of this Agreement.

It is agreed by the parties hereto that the procedure provided in this section is adequate if followed in good faith by both parties for fair and expeditious settlement of any grievances arising locally in any mining division of the Company. It is further agreed that if this procedure is not followed and as a result of such failure a work stoppage or strike occurs, that after 48 hours from the commencement of such stoppage or strike, if same still continues, the offending party or parties persisting in refusal to resume work and follow the orderly procedures of this section may be suspended and later discharged from the employ of the Company in accordance with the procedure of Section 10 of this Agreement.

The Company agrees that prior to such discharge it will provide a list of names, check numbers and addresses of employees considered by it to be involved to the representatives of the Union for the district in which the mines are located.

It is the purpose of this section to provide procedure for prompt, equitable adjustment of alleged grievances. Failure to file alleged grievance complaints promptly on occurrence of the grievance is construed to be not consistent with the intent of this section or of this Agreement.

Section 9—Management. The Management of the Mines and the direction of the working forces, including the right to hire, suspend or discharge for proper cause, or tranfer, and the right to relieve employees from duty because of lack of work, or for other legitimate reasons, is vested exclusively in the Company, provided that this will not be used for purposes of discrimination against any member of the Union.

Section 10—Discharge Cases. In the exercise of its rights as set forth in Section 9, Management agrees that

a member of the Union shall not be peremptorily discharged from and after the date hereof, but that in all instances in which Management may conclude that an employee's conduct may justify suspension or discharge, he shall be first suspended. Such suspension shall be for not more than five (5) calendar days. During this period of initial suspension the employee may, if he believes that he has been unjustly dealt with, request a hearing and a statement of the offense before the superintendent of the mining division with or without the member or members of the Grievance Committee present as he may choose. At such hearing the facts concerning the case shall be made available to both parties. After such hearing Management may conclude whether the suspension shall be converted into discharge or, dependent upon the facts of the case, that such suspension may be extended or revoked. If the suspension is revoked the employee shall be returned to employment and receive full compensation at his regular rate of pay for the time lost, but in the event a disposition shall result in either the affirmation or extension of the suspension of discharge of the employee, the employee may allege a grievance which shall be handled in accordance with the procedure of Section 8—"Adjustment of Grievances." Final decision on all suspension or discharge cases shall be made by the Company within five (5) days from the date of filing of the grievance, if any. Should it be determined by the Company or by an umpire in accordance with Step 5 of the Grievance Procedure that the employee has been discharged or suspended unjustly, the Company shall reinstate the employee and pay full compensation at the employee's regular rate of pay for the time lost.

Section 11—Safety And Health. The Company shall continue to make reasonable provisions for the safety and health of its employees at the mines during the hours of their employment. Protective devices, wearing apparel

and other equipment necessary to properly protect employees from injury shall be provided by the Company in accordance with the practices now prevailing in each separate mine. Proper heating and ventilating systems shall be installed where needed.

Section 12—Rate Establishment And Adjustment. It is recognized that changing conditions and circumstances may from time to time require adjustment of wage rates or modification of wage rate plans because of alleged inequalities, development of new mining processes, changes in the content of jobs, or mechanical improvements brought about by the Company in the interest of improved methods and product. Under such circumstances the following procedure shall apply:

1. When a bona fide new job or position is to be established:

a. Management will develop an appropriate rate by the regular procedure in effect in the Company for its industrial engineering and industrial relations activities, including the employment of job evaluation, and in the case of incentive rates the application of accepted industrial engineering methods.

b. Such procedure having been conformed to, the rate may be established by Management to cover the job or position in question. The Union grievance committeeman or committeemen representing the employee or employees to be affected shall be informed by Management in advance concerning such rates.

The rate having been established may subsequently be subject to adjustment as provided in paragraph "c" below.

c. If, after a reasonable trial period following the establishment by Management of the rate or rates for new jobs or positions, grievances are alleged by either employees or Management concerning such rates—which grievances cannot be satisfactorily arjusted by mutual agreement, the question as to the equity of such rates in relation to the mine rate structure and the requirements of the job or position as established by sound industrial engineering procedures may be appealed to an impartial umpire in accordance with the provisions of Section 8 (Adjustment of Grievances), but no formal grievances may be presented under Section 8 until a reasonable period has elapsed since the installation of the rates and the operation of the equipment to which the new rates apply, which period will permit of study and adjustment, if necessary, of the rates to the varying conditions of operation attendant upon the establishment of the new operation to which the new jobs or positions apply. It is recognized that the term "reasonable period" may vary with the type of operation or equipment to which the new rates apply, but shall not, unless by mutual agreement, be construed to apply to a period in excess of twelve months.

2. When a rate, either straight hourly, tonnage or incentive, is alleged by either party to be improperly fixed in relation to the rate structure for the mine unit involved, and in relation also to units engaged in similar work in other ore and limestone mines of the Company in the operating district in which the mine is located, and when it is desired by either party to adjust such rate in the interest of equitable differentials in earnings and proper cost of production (no changes in methods, equipment or production standards being involved):

a. The procedure outlined in 1-a, above is to be followed. In addition, the rate proposals so developed will be fully explained to the Union representatives with the

objective of obtaining their agreement to the proposals on the basis of equity.

Negotiations may be instituted by the grievance committeemen representing affected employees or by Management. If subsequent rate studies are necessary, Management will acquaint the Union grievance committeeman or committee regarding such study and seek their cooperation. When the study has been completed and the proposed new rates computed, Management representatives will again confer with the committeeman or committee and fully explain the results of the study. The procedure involved in explanation and negotiations will be that procedure outlined in Section 8 of the Agreement under which the first contacts will be with the foreman, with negotiations continuing through the successive steps of such procedure if necessary including but not going beyond Step 4 thereof. In the absence of mutual agreement no changes shall be made in the rates.

b. Should the Management and Union representatives fail to reach an agreement as to rates, they shall then endeavor to arrive at an agreement for the installation of the proposed rates for three-months' or otherwise agreed upon period which will serve as a trial or experimental period. At the conclusion of the trial or experimental period the results of the study and the related facts and the experience accumulated will (if formally requested in writing by Management or the Union representatives within 30 days thereafter) be further reviewed jointly by Management representatives and the Union for the purpose of making such further adjustment as the facts and experience accumulated warrant. Any adjustment of rates agreed to during the trial or experimental period shall be effective as of the date immediately following the completion of such trial or experimental period.

3. When changes are made in equipment, method of processing, material processed, or quality or production standards which would result in a substantial change in job duties or requirements; or where over a period of time an accumulation of minor changes of this type have occurred which, in total, have resulted in a substantial change in job duties or requirements, adjustments of hourly, incentive, and tonnage rates may be required.

In such cases Management will follow the procedure outlined in paragraph 2-a and-b except that in the absence of agreement in any step of the grievance procedure, Management may establish the new rates and the Union may carry the grievance through all steps of the contract procedure established for the settlement of grievances for determination as to whether the earnings received by the employees from the new rates have resulted in a lowering of the rates applicable to him under Section 3 of this Agreement or a failure to provide proper compensation for such increased effort, if any, brought about by the changes in the job duties or requirements.

Section 13—Holidays. The following days shall be considered holidays:

July 4th,
Labor Day, and
Christmas

On these holidays there shall be no regular production work except in cases of continuous operations. The term "continuous operations" shall be interpreted in accordance with prevailing practices in each mining division.

Employees not engaged in continuous operations, if required to work on the holidays herein enumerated, shall

be paid at the rate of one and one-half times their regular rate of pay for the hours worked.

Section 14—Prior Agreements. This 1941 Agreement terminates the October 6, 1938, Agreement between the parties. To grievances which arose prior to the date of this 1941 Agreement shall be taken up for adjustment except that grievances which as of the date of this Agreement have been appealed in writing from a decision in the prior steps of the grievance procedure defined in the prior agreements or are in the process of being adjusted may be considered under the procedures of Section 8 of the 1941 Agreement and be determined in accordance with the applicable provisions of the 1941 Agreement.

Section 15—Termination Date. The terms and conditions of this Agreement shall continue in effect until changed or terminated, as follows:

a. Either party may at any time and from time to time give ten (10) days' written notice to the other party of the time for the commencement of a conference of the parties for the purpose of negotiating the terms and conditions of a change of the 1941 Agreement, which conference shall be at the office of the Company in Birmingham, Alabama, unless otherwise mutually agreed, and

b. If, because of failure to agree the 1941 Agreement is not changed by a written Agreement entered into by the Company and the Union within twenty (20) days from the giving of said notice, then the 1941 Agreement and all of the provisions thereof, shall terminate upon the expiration of twenty (20) days from the giving of said notice.

Notice hereunder shall be given by registered mail, be completed by and at the time of mailing, and if by the Company, be addressed to the International Union of Mine,

Mill & Smelter Workers, Van D. Jones, 233 Fairfax Avenue, Bessemer, Alabama, and if by the Union, be addressed to the Company at Brown-Marx Building, Birmingham, Alabama.

Either party may, by like written notice, change the address to which registered mail notice to it shall be given.

TENNESSEE COAL, IRON AND RAILROAD COMPANY,
By E. M. BALL,
General Superintendent, Ore Mine.
By W. J. KELLY,
Acting Manager of Industrial Relations.

INTERNATIONAL UNION OF MINE, MILL & SMELTER WORKERS,
ALLEN D. McNEIL,
VAN D. JONES,
FRANK ALLEN,
W. C. GUNNIN,
E. A. SISEMORE.

4553 PLAINTIFFS' EXHIBIT 16.

26 Opinions of Attorneys General 64.

Eight-Hour Law—Reclamation Service.

There is no conflict between the declaration in section 4 of the reclamation act of June 17, 1902 (32 Stat., 388), that eight hours shall constitute a day's work upon the public works therein specified, and the saving clause in section 1 of the act of August 1, 1892 (27 Stat., 340), which

allows more than eight hours work in one calendar day "in case of extraordinary emergency."

Irrigation works for the reclamation of arid and semi-arid lands, act of June 17, 1902 (32 Stat., 388), perfectly and comprehensively fill the idea of "public works of the United States."

The eight-hour law contemplated by the act of August 1, 1892 (27 Stat., 340), means eight hours of effective labor.

The blasting, cleaning of tracks, repair of machinery, and all other similar matters incident to the reclamation work, essential to prompt and continuous service in the regular day, may legally be done before and after regular hours. The law does not prescribe in what hours of the day the labor shall be done.

Blacksmiths and their helpers, firemen, and pumpmen are either mechanics or laborers within the meaning of the eight-hour law.

The status of teamsters, cooks, and flunkies not determined. (See 20 Op., 459.)

It is the duty of the engineers of the Reclamation Service to see that the eight-hour law is observed by the contractors and to report violations of that law.

Department of Justice, October 11, 1906.

Sir: Your letter of September 21 raises the question of the application of the eight-hour law to the Reclamation Service of the Geological Survey, and requests my opinion upon the following points:

"(1) Is the proviso to section 4 of the act of June 17, 1902, *supra*, which declares in part, 'That in all construction work eight hours shall constitute a day's work,' to be regarded as in anywise repealing or modifying that provision of the act of August 1, 1892, which makes it unlawful to employ or permit laborers to work more than eight hours in any one calendar day on any public works of the United States 'except in case of extraordinary emergency.' Differently stated, is the declaration in the act of June 17, 1902, that eight hours shall constitute a day's work upon the public works therein specified, in conflict with the saving clause in the act of August 1, 1892, which allows more than eight hours' work in one calendar day 'in case of extraordinary emergency?'

"(2) Are blacksmiths and their helpers, teamsters, hauling camp supplies, etc., firemen, pumpmen, cooks, and flunkies to be classed as 'laborers and mechanics' within the meaning of these terms as employed in the act of August 1, 1892?

"(3) Are the engineers of the Reclamation Service responsible under the statutes in case the contractors on the works under their supervision shall require more than eight hours' labor from laborers and mechanics upon these works?"

The letter of the Director of the Geological Survey states that it is dangerous both to life and property to do blasting during the regular hours of labor when the men and the steam shovel are at work; and that it is very necessary to keep the powder men at their posts after the regular working hours in order to make their final preparations for shooting the blasts. The letter also states that it is necessary to clean up to shale thrown down by the blasts upon the tracks before the regular working hours the following morning, in order that the force on the cuts and steam

shovel shall not then be standing around idle until the tracks can be cleaned. The same reason for work before or after the regular hours applies to the necessary shifting of track, shoeing of horses, repair and cleaning machinery, and to other labor essential to the promptness and efficiency of the regular day service of men and machinery. It is also suggested that if water for domestic use of the camp may not be hauled after regular working hours by some of the teams on the work, it would be necessary to keep an extra team for this purpose only, at much greater cost than "by putting in a little time by extra work;" and that teamsters hauling supplies, cooks, and "flunkies" (by which I understand scullions or assistants to cooks are meant) must put in more than eight hours per day.

The eight-hour law of 1892 (act of August 1, 1892, 27 Stat., 340) provides (sec. 1):

"That the service and employment of all laborers and mechanics who are now or may hereafter be employed by the Government of the United States, by the District of Columbia, or by any contractor or sub-contractor upon any of the public works of the United States or of the said District of Columbia, is hereby limited and restricted to eight hours in any one calendar day, and it shall be unlawful for any officer of the United States Government or of the District of Columbia or any such contractor or sub-contractor whose duty it shall be to employ, direct, or control the services of such laborers or mechanics to require or permit any such laborer or mechanics to work more than eight hours in any calendar day except in case of extraordinary emergency."

The reclamation act provides (act of June 17, 1902, sec. 4, 32 Stat., 388):

"In all construction work eight hours shall constitute a day's work."

There can be no doubt that under the terms of these laws and in the light of the discussions and opinions relative to the eight-hour law (20 Op., 454, 459; 23 Op., 174; 26 Op., 30, 36) "irrigation works for the storage, diversion, and development of waters for the reclamation of arid and semi-arid lands" (sec. 1, Reclamation act) perfectly and comprehensively fill the idea of "public works of the United States." This conception is not weakened by the fact that ultimately the management and operation of such irrigation works is to pass to the owners of the lands irrigated (sec. 6), for not only when constructed are all these irrigation works public works of the United States upon lands of the United States to be acquired by condemnation if necessary (sec. 7), but section 6 also provides "that the title to the reservoirs and the works necessary for their protection and operation shall remain in the Government until otherwise provided by Congress."

But I think that the eight-hour day means eight hours of effective labor, and therefore so far as your questions present the case of laborers and mechanics who, from the exigencies of the situation, must wait until after the completion of the regular day to finish their work, I am of the opinion that the blasting, cleaning of tracks, repair of machinery, and all other similar work essential to prompt and continuous service in the regular day may be legally done before and after the regular hours. To be more specific, laborers and mechanics who are called upon to do two hours' work, for example, before or after the regular day begins or ends have no just cause for complaint that the law is violated if they are only called upon to work six more hours during the regular hours. The law gives no countenance to the conception that the interval between the beginning and end of the regular day is a controlling convention which excludes labor at any other time and entitles workmen to stand around idle if their services can not be fully availed of during that interval. The law

limits the working day to eight hours, but it does not prescribe in what hours of the day the work shall be done. Practically, no doubt, there should be a real necessity, as is obviously the case here, for work during other hours than the regular day; and there should be scrutiny and care lest abuses arise which, however, the right of contract, subject to the law, between laborer and employer ought to prevent.

I do not wish to enter upon the *minima* of the case unnecessarily, and yet, noticing the claim that it would cost more to provide water for the camp unless it can be hauled on "extra time," I take occasion to observe that the element of cost makes no difference. The legality of the proceeding depends upon the consideration whether the men employed on this service are laborers or mechanics, or whether they give, excluding this service, eight hours' effective labor.

Your inquiry whether the engineers of the Reclamation Service are responsible for the action of contractors in requiring more than eight hours' labor for laborers and mechanics is susceptible of two constructions. It is certainly my opinion that it is their duty to be vigilant in their scrutiny and to report violations of law which may come under their observation. This is not altogether a question of law for my determination, but rather, perhaps, a question of administration for you to settle in the light of the general executive policy. But as the question has been touched upon by my predecessor, Mr. Miller, I may properly express my view. The case of *United States v. Driscoll* (96 U. S., 421) has also been brought to my attention. That decision merely held that a workman for a contractor could not maintain a claim against the United States for compensation for labor over eight hours a day; that there was no privity between him and the United States. There was no occasion there for any intimation from the Court

regarding the administrative duty of the United States in respect to violations of the law by contractors, and, accordingly, no intimation whatever was given. There is a current misconception as to the scope of Attorney-General Miller's opinion (20 Op., 501). Mr. Miller was requested by the Secretary of the Treasury, at the instance of a contractor, to determine whether laborers and mechanics engaged by the contractor to carry out a contract by the Government came within the application of the eight hour law. Mr. Miller declined to answer the inquiry, on the ground that it was not a question of law arising in the administration of the Treasury Department. The inquiry was in reality the inquiry of the contractor, and with that fact in mind, doubtless, Mr. Miller observed that—

"The duty to employ, direct, or control such laborers or mechanics, and the penalty of their wrongful employment is with the contractor and not with the Government or any of its officers or agents."

But Mr. Miller does not by this remark undertake to determine what the deliberate executive policy on the subject might or should be. My own view of the matter, as now squarely presented, is that it is the duty of the engineers of the Reclamation Service under your direction to see to it that the law is observed by the contractors and to report any violation of it which comes under their observation. I understand this to be the sense in which you ask whether they are responsible—not in the sense of legal liability to the workmen.

Recurring, then, to your questions, as to the first my answer is that there is no conflict between the act of August 1, 1892, and the proviso to section 4 of the act of June 17, 1902. The "extraordinary emergency" of the former act would apply to the latter. The acts are to be construed together, and I do not think it was the intention

of Congress, by the proviso in the Reclamation act and the use of the term "construction work," either to displace the provisions of the act of August 1, 1892, as to laborers and mechanics not strictly engaged in "construction work," or to exclude the exception of an "extraordinary emergency." It is not necessary for me to define generally what an extraordinary emergency is, and it is clear to me that the facts in this case do not present an extraordinary emergency as intended by the law. But, with the qualifications which I have stated, I wish to make it clear that the eight hour law applies fully to contractors on the irrigation works constructed by the United States.

Yours second question I have answered, as far as the facts before me permit; but I may add that it seems clear to me that blacksmiths and their helpers, firemen and pumpmen are either mechanics or laborers. As to teamsters, cooks, and "flunkies," I leave the inquiry as to their status where Mr. Miller left a similar query in 20 Op., 459, and add the remark that the obvious necessity of eight hours' effective labor in any case seems to dispose of that point as now raised. The answer to the third question, as already indicated, is that engineers of the Reclamation Service responsible to the extent of requiring the law to be observed and reporting violations of it.

Very respectfully,

W. H. MOODY.

The Secretary of the Interior.

4561 PLAINTIFFS' EXHIBIT 17.

26 Opinions of the Attorneys General 605.

Eight-Hour Law—Hours Of Service Of Lock Tenders, Etc.

Persons employed as lock tenders, lock helpers, lockmen, and in similar employments at the locks of the various canals owned and operated by the Government may be called upon to perform service at any hour of the day, and such requirement is legal and proper under the eight-hour law (act of August 1, 1892; 27 Stat., 340) so long as the total service rendered does not exceed eight hours per day.

The eight-hour law includes skilled as well as unskilled workmen; and the employment of persons for a longer period than eight hours in any one day "when a dam is being raised or lowered" and the service is one "requiring skill and training" which "cannot safely be entrusted to inexperienced men," is not an employment in case of an "extraordinary emergency," and is a violation of that statute.

It is a familiar rule of construction that where a particular construction of a statute will occasion great inconvenience or produce inequality and injustice, that view is to be avoided, if another and more reasonable interpretation is present in the statute.

Department of Justice, May 11, 1908.

Sir: I have the honor to acknowledge the receipt of your letter of April 29, ultimo, directing my attention to a request of December 23, 1907, for my opinion "as to whether certain classes of employees variously designated as lock masters, lock keepers, lock helpers, lockmen, watchmen,

firemen, enginemen, stokers, teamsters, etc., referred to in a memorandum of the Judge Advocate-General, inclosed with Department's letter, could be legally excepted from the requirements of the eight-hour law (act of August 1, 1892; 27 Stat., 340) on the ground that they were neither laborers not mechanics within the meaning of the act."

It seems from the inclosed memorandum that, at certain locks and dams, persons are employed whose duties are performed at irregular hours and do not require their attention for eight hours in the calendar day. These employees are liable to be called upon at any hour in the day for a service lasting but a few minutes; but as a fact, the whole sum of the time in which they are engaged is but a fraction of eight hours. The rest of the day is entirely their own. The question is whether the service and employment of such persons, under such circumstances, is legal and proper within the limit and restriction of the statute.

As to laborers employed in a similar manner, I refer you to what was said by my predecessor, Attorney-General Moody (26 Op., 67):

"But I think that the eight-hour day means eight hours of effective labor, and therefore so far as your questions present the case of laborers and mechanics who, from the exigencies of the situation, must wait until after the completion of the regular day to finish their work, I am of the opinion that the blasting, cleaning of trucks, repair of machinery, and all other similar work essential to prompt and continuous service in the regular day may be legally done before and after the regular hours. To be more specific, laborers and mechanics who are called upon to do two hours' work, for example, before or after the regular day begins or ends have no just cause for complaint that the law is violated if they are only called upon to

work six more hours during the regular hours. The law gives no countenance to the conception that the interval between the beginning and end of the regular day is a controlling convention which excludes labor at any other time and entitles workmen to stand around idle if their services cannot be fully availed of during that interval. The law limits the working day to eight hours, but it does not prescribe in what hours of the day the work shall be done. Practically, no doubt, there should be a real necessity, as is obviously the case here, for work during other hours than the regular day; and there should be scrutiny and care lest abuses arise which, however, the right of contract, subject to the law, between laborer and employer ought to prevent."

The cases mentioned in the memorandum of the Judge-Advocate-General come fully within these principles. Under the Cincinnati office are included locks on the Muskingum, Kentucky, and Big Sandy rivers. The employees live at the locks, in Government houses, and none is required to work an aggregate time in excess of eight hours though they are subject to call.

At Milwaukee are included 21 locks at canals of Fox River; the number of lockages averaging less than 2 per day and rarely exceeding 8 for the twenty-four hours.

At Louisville office are included locks of the Louisville and Portland Canal, and of the Green, Barren, Rough, and Wabash rivers. It is only occasionally that workmen are kept busy through eight hours of service. When traffic is light, actual service amounts to little more than being on hand.

At Nashville office are included locks where the lockmen are furnished quarters and none works more than three hours a day.

At Rock Island office are included locks where men do less than eight hours' work, the lockages averaging four a day. The men live in Government quarters and are required to be subject to duty from sixteen to twenty-four hours.

At Montgomery office are included locks where men have less than one hour effective work in a day and live on Government premises.

At Mobile office are included locks in Black Warrior River where lockages average less than 2 a day and the hours of work muck less than eight.

At Little Rock office, lock where lockages average less than one a day.

In these cases to require that a sufficient number of men should be employed to prevent any of them from being liable to duty except within a determined and arbitrary period of eight continuous hours would be to put an unreasonable construction upon the statute. It would recognize a favored condition of employment not intended by the law.

A familiar rule is, that where a particular construction of a statute will occasion great inconvenience or produce inequality and injustice, that view is to be avoided, if another and more reasonable interpretation is present in the statute.

Other instances mentioned in the memorandum are upon different footing. At places under the control of the *Pittsburg office* men are sometimes required to work more than eight hours "when dam is being raised or lowered;" and the service is one "requiring skill and training and could not safely be entrusted to inexperienced men." This

does not make a case of extraordinary emergency. The act includes skilled as well as unskilled workmen. The need is for more men; not for the employment during more hours.

At other places, employees are classed as watchmen, dam tenders, custodians, etc. With respect to the legal status of such employees under the eight-hour law, it is impossible to speak with certainty without very full information as to the nature of their employment. I respectfully refer you on this subject to what is said in my letter of the 7th instant.

In this view I have expressed my opinion upon the construction of the act to meet what I deem to be the object of your inquiry.

Respectfully,
CHARLES J. BONAPARTE.

The Secretary of War.

4565 PLAINTIFFS' EXHIBIT 18.

27 Comptroller of the Treasury 1060.

Traveling Expenses—Railway Postal Clerks.

In the act of February 28, 1919, 40 Stat. 1195, and prior acts, authorizing payment of traveling expenses to railway postal clerks while on duty after a certain number of hours from the time of beginning their initial run, the phrase, "time of beginning their initial run" is intended to mean the time of taking up their duties on the railway post office car at the terminal station rather than the time of starting from their home.

Decision by Comptroller Warwick, June 14, 1921:

Henry C. Moore applied April 27 for a revision of the action of the Auditor for the Post Office Department in disallowing by certificate No. 8025, dated March 19, 1921, his claim for alleged arrears of travel allowances as a railway postal clerk from July 1, 1910, when such allowances first becamse payable, until August 21, 1920, the date of his retirement.

From March 10, 1892, to the date of his retirement Mr. Moore was employed on the Burlington-Carrollton railway post office with residence at Bloomfield, Iowa, which is located on the line of the run between Burlington and Carrollton.

The act of May 12, 1910, 36 Stat., 363, effective from July 1, 1910, provides:

"That in addition to the salaries hereinbefore provided the Postmaster-General is hereby authorized to make travel allowances, not exceeding in the aggregate the sum hereby appropriated, to railway postal clerks assigned to duty in railway post-office cars for expenses incurred by them while on duty, after twelve hours from the time of beginning their initial run, under such regulations as he may prescribe, and in no case shall such an allowance exceed seventy-five cents per day."

This provision has been amended several times but in all cases the allowances are payable for the period while on duty after a fixed number of hours "from the time of beginning their initial run." As amended by the act of February 28, 1919, 40 Stat., 1195, the provision reads:

"That hereafter, in addition to the salaries provided by law, the Postmaster General is hereby authorized to make

travel allowances in lieu of actual expenses, at fixed rates per annum, not exceeding in the aggregate the sum annually appropriated, to railway postal clerks, acting railway postal clerks, and substitute railway postal clerks, including substitute railway postal clerks for railway postal clerks granted leave with pay on account sickness, assigned to duty in railway post-office cars, while on duty, after ten hours from the time of beginning their initial run, under such regulations as he may prescribe, and in no case shall such an allowance exceed $2 per day."

Claimant's initial run started from Burlington and he has been allowed travel allowances after the prescribed number of hours from time of leaving said place. But he contends that travel allowances should begin to run after the prescribed number of hours from time of starting from his home, which was 84 miles from Burlington. In support of his contention he refers to the provision in the act of February 28, 1895, 28 Stat., 692, which reads:

"That all clerks hereafter appointed to the Railway Mail Service and to perform duty in railway post offices shall reside at some point on the route to which they are assigned; but railway mail clerks heretofore appointed and now performing such duty shall not be required to change their residence."

It seems that claimant has assumed that this law requires railway postal clerks to reside at the terminus of their run unless assigned prior to February 28, 1895, but such is not the case. It merely requires that they reside at some point on the route. Since claimant did reside at a point on the route to which he was assigned the provision did not affect him in any way.

That the phrase "time of beginning their initial run" means, and was intended to mean, the time of taking up

their duties on the railway post-office car at the terminal station, rather than the time of starting from their home, I think there is no room for reasonable doubt. Therefore, the action of the auditor in disallowing the claim is affirmed.

4568 PLAINTIFFS' EXHIBIT 19.

9 Decisions of the Comptroller General 200.

(A-29317)

Compensation—Extra Pay For Night Work—Railway Postal Clerks.

A railway postal clerk who is ordered to deadhead back over his run on official business is not entitled while so traveling to the 10 per cent extra pay for night work authorized by the act of May 24, 1928, 45 Stat. 725.

Comptroller General McCarl to the Postmaster General, November 11, 1929:

I have your letter of October 25, 1929, requesting decision whether a railway postal clerk who is ordered to deadhead from his home at Charlotte, N. C., to Washington, D. C., and return, in connection with official business, is entitled to be paid the 10 per cent extra pay for night work authorized by the act of May 24, 1928, 45 Stat. 725, which provides as follows:

After July 1, 1928 * * * railway postal clerks * * * who are required to perform night work, shall be paid extra for such work at the rate of 10 per centum of their hourly pay per hour: *Provided*, That night work is de-

fined as any work done between the hours of six o'clock postmeridian and six o'clock antemeridian.

It should be noted that the 10 per cent extra is paid for night work and that night work is defined as any work done between 6 p. m. and 6 a. m. In the case presented the employee was ordered to proceed from his home to Washington and return, but he did not perform any work on either journey. He was in a travel status and received credit for full time while deadheading under orders as authorized in the act of April 24, 1920, 41 Stat. 580, and was also paid the cost of a berth in a Pullman for each journey. Such a case does not come within the meaning of the act of May 24, 1928, *supra*, which was intended to provide an additional allowance for actual work at night.

You are advised that payment of the 10 per cent extra for night work is not authorized under the conditions shown in the case presented.

4570 PLAINTIFFS' EXHIBIT 20.

14 Comptroller General 907:

(A-61311)

Compensation—Overtime—40-Hour Week.

No per diem in lieu of subsistence or other travel expenses accrue to an employee during the period of a stopover for personal reasons while otherwise in a travel status.

The overtime for which compensation at the rate of time and one-half time is authorized by section 23, of the act of March 28, 1934, 48 Stat. 522, establishing the 40-hour

week, has reference to time in excess of 40 hours a week during which the employee is engaged in labor. No labor is performed during periods of travel between duty stations and headquarters and accordingly during official travel time and the employee is limited to pay the basic rate per hour for not to exceed 8 hours per day.

Comptroller General McCarl to the Secretary of Commerce, June 18, 1935:

There has been considered the letter dated January 28, 1935, from the Acting Assistant Secretary of Commerce, forwarding for direct settlement the claim of Frederick W. Morong for $5.25 per diem in lieu of subsistence at the rate of $3.50 a day for 1 1/2 days on October 7 and 8, 1934, and also forwarding for consideration the request of the Commissioner of Lighthouses for decision of questions as follows:

(A) Can an employee who regularly works but forty hours per week (eight hours each day from Monday to Friday, inclusive) and is paid on an hourly basis be required to travel on Saturdays and Sundays without payment of salary on an overtime basis for such time?

(B) If not, should his per diem be allowed to continue during the time he interrupts his travel over week ends?

(C) If not, should time lost in the succeeding week because of interruption of his travel be charged to leave? Using facts stated in the attached voucher for example: If Mr. Morong cannot be required to travel on Saturdays and Sundays without compensation for time in travel status, should the period from 7:30 a. m. (at which time he regularly reports for duty on week days) until 10:45 a. m. on October 8, 1934, be charged to leave?

Pursuant to travel order dated September 25, 1934, Federick W. Morong, a machinist in the Lighthouse Service working on a 40-hour week basis, Monday to Friday, inclusive (sec. 23 of the act of March 28, 1934, 48 Stat. 522, 14 Comp. Gen. 215), left his official station at Portland, Maine, Monday, October 1, 1934, and arrived at Manana Island for repair of fog signal, leaving at 1:00 p. m., Saturday October 6, by motor boat for Thomaston, Maine, arriving at 3:30 p. m. He could have left Thomaston, at 5:35 and arrived in Portland, his duty station, at 8:20 the same day, but he states that the motor boat in which he traveled was small, with little or no shelter, and that on account of a bad rainstorm he was drenched and very cold upon arrival at Thomaston, necessitating a lay-over at that place until 7:45 a. m. Monday, October 8, 1934, at which time he left for Portland, Maine, arriving at 10:45 a. m. Claim for additional per diem for Sunday, October 7, and Monday, October 8, 1 1/2 days, amounting to $5.25, was disallowed by the administrative office.

An employee necessarily engaged in traveling on official business under competent orders away from official duty station is to be regarded as in a travel, as well as duty status, but any interruption for personal reasons suspends such duty and travel status. Thus this employee continued in a travel and duty status until 3:30 p. m. Saturday, October 6, which status was then interrupted for personal reasons and was not resumed until Monday at 7:45 a. m., October 8, by reason of departure from Thomaston, Maine.

Section 51 of the Standardized Government Travel Regulations issued January 30, 1934, provides as follows:

Day defined.—In computing the per diem in lieu of subsistence for continuous travel of more than 24 hours the calendar day (midnight to midnight) will be the unit, and for fractional parts of a day at the commencement or

ending of such continuous travel, constituting a travel period, one-fourth of the rate for a calendar day will be allowed for each period of six hours or fraction thereof. For continuous travel of less than 24 hours, constituting a travel period, such period will be regarded as commencing with the beginning of the travel, and ending with the completion thereof, and for each six-hour portion of the period or fraction thereof one-fourth of the rate for a calendar day will be allowed: *Provided*, that no per diem will be allowed when the departure is after 8 a. m., and the return on the same day is prior to 6 p. m., or for any absence not exceeding three hours.

As the stop-over from 3:30 p. m., Saturday, to 7:45 a. m., Monday, was for personal reasons the claimant is not entitled to any per diem in lieu of subsistence between those hours. As he was in a travel status 15 hours and 30 minutes Saturday he would be entitled to only three-fourths of a per diem for that day, and from 7:45 a. m., to 10:45 a. m., Monday, entitles him to an additional one-fourth per diem. As he was paid a full per diem for Saturday nothing additional is due him.

Section 23 of the act of March 28, 1934, 48 Stat. 522, establishing the 40-hour week contains the following proviso:

* * * *Provided*, That the regular hours of labor shall not be more than forty per week; and all overtime shall be compensated for at the rate of not less than time and one-half.

The over-time for which the statute authorizes time and one-half has reference to time in excess of 40 hours per week during which the employee is engaged in "labor". During the time this employee was traveling between his temporary duty station and headquarters he was not

engaged in labor, even though in a duty as distinguished from a nonpay status, and accordingly time spent on such trips should be eliminated when computing hours of labor for over-time pay purposes, the employee being entitled for such official travel time to pay at the basic rate per hour for not to exceed 8 hours in any one day, together with per diem in lieu of subsistence, as stated above, even though the time actually spent on official travel may exceed 8 hours. Morong would not be entitled to any compensation or per diem for the time between 3:30 p. m., Saturday, and 7:45 a. m., Monday. The questions presented are answered accordingly.

4574 PLAINTIFFS' EXHIBIT 21.

Opinion of the Attorney General of the United States.

Application of the Eight-Hour Law to Employees of the Civilian Conservation Corps.

The underlying purpose of the eight-hour law (U. S. C., title 40, secs. 321-326) is to confer upon workmen the benefits, physical and moral, supposed to flow from a reduction of their labor to 8 hours a day.

While to the extent necessary to guarantee such benefits the statute should be construed liberally, it is not to be extended to cases not clearly within its terms or to those exceptional to its spirit and purpose, but is to be fairly construed according to the legislative intent.

Voluntary instruction offered by certain employees of the Civilian Conservation Corps to enrollees does not come within the purview of the Statute.

August 8, 1939.

The President.

My Dear Mr. President: I have the honor to refer to your memorandum of July 28, 1939, with which you transmit a letter of the Federal Security Administrator, dated July 26, 1939, requesting my opinion whether voluntary instruction, as outlined in the Administrator's letter, offered by certain employees of the Civilian Conservation Corps to enrollees comes "within the purview of what is generally termed the eight-hour law, as set forth in United States Code, title 40, sections 321-326."

The Administrator's letter reads in part:

"The act of June 28, 1937, establishing the Civilian Conservation Corps (50 Stat. 319; 16 U. S. C. 584-584q), provides in section 1 'that at least 10 hours each week may be devoted to general educational and vocational training.' This is regarded as a very important function in the C. C. C. and this training is carried on very largely in the evenings when enrollees who are assigned to work projects have returned to camps. * * *

"All of the enrollees are urged, though not compelled, to attend evening classes in order to fit them more effectively for the business of making a living after they leave the C. C. C. The various employees at the camp * * * teach enrollees in classes after working hours have finished. These teachers, with the exception of one paid educational adviser, all volunteer their services and are not compelled to offer instruction as a part of, or a prerequisite to, their employment. It is our belief that the voluntary instruction offered by these men * * * does not come within the purview of what is generally termed

the eight-hour law, as set forth in United States Code, title 40, sections 321-326.

"* * * The question with reference to the applicability of the eight-hour law in the circumstances heretofore stated has been submitted to the counsel of the Civilian Conservation Corps, and he has expressed the opinion that, under the circumstances and for the purposes hereinbefore indicated, the eight-hour law is inapplicable."

I agree with the conclusion reached by the Administrator and the counsel for the Civilian Conservation Corps. As stated by Attorney General Wickersham (29 Op. 488, 492), "the underlying purpose of all this legislation is to confer upon workmen the benefits, physical and moral, supposed to flow from a reduction of their labor to 8 hours a day;" and to the extent necessary to guarantee such benefits it should be liberally construed. The statute, however, "is not to be extended to cases not clearly within its terms or to those exceptional to its spirit and purpose," *United States v. Chemical Foundation*, 272 U. S. 1, 18, but is "to be fairly construed according to the legislative intent," *United States v. Bowman*, 260 U. S. 94, 102. I cannot believe that the Congress intended to deprive an employee of the United States of the privilege—attended probably with a feeling of moral satisfaction—of voluntarily giving to his fellow workmen needed instruction calculated to greatly improve their condition and station in life, and I am unwilling so to construe the statute.

Accordingly, the Administrator's question is answered in the negative.

Respectfully,
FRANK MURPHY.

4577 PLAINTIFFS' EXHIBIT No. 45.

Comptroller General of the United States
Washington.

July 16, 1941.

Mr. Ernest L. All,
c/o Bradley, Baldwin, All and White,
2100-28 Comer Building,
Birmingham, Alabama.

Dear Sir:

In response to your letter dated July 2, 1941, received July 8, 1941, requesting copies of certain communications respecting the hours of duty of employees of the Immigration and Naturalization Service at the Angel Island Station, California, there are transmitted herewith copies of the following letters:

Acting Comptroller General, October 28, 1937.

Department of Labor, November 22, 1937.

Comptroller General, October 9, 1939.

Department of Labor, November 2, 1939.

Acting Comptroller General, August 20, 1940.

Department of Justice, October 3, 1940.

Very truly yours,
LINDSAY C. WARREN,
Comptroller General of the
United States.

Comptroller General of the United States
Washington.

A-44009

October 28, 1937.

The Honorable
The Secretary of Labor.

Madam:

Examination by representatives of this office of the accounts and records of Edward L. Haff, District Director of Immigration and Naturalization, San Francisco, Calif., brings out matters to which it is throught advisable to invite your attention, and which are reported substantially as follows:

1. At the time of inspection, August 11, 1937, there were on hand collections amounting to $593.92 which had not been taken into the records, as follows:

(a) Hospitalization	$ 38.50
The sum of $50 was received to guarantee to the Government the charges for hospitalization for Ernesto Garcia who entered the hospital at Angel Island July 30, 1937. He was released at the end of four days, during which time a charge of $11 had accrued, and on his departure he was refunded in cash the sum of $39 for which his receipt was taken, leaving for deposit a balance of	$ 11.00
Also, check of the Standard Oil Company of California, in the sum of $27.50, had been received to cover hospital care of two members of the crew of the M. S. Ferncastle, for the period July 7, to 11, 1937, there being for deposit the amount of	$ 27.50
(b) Unofficial Use of Telephone Facilities	$ 5.00

The sum of $5.00 in currency, received in connection with the case of G. C. Cay (No. 37458 2-1) as a guarantee deposit to cover cost of telephone messages.

(c) Deposits to Guarantee Performance of Contracts $170.00

Two certified checks payable to the order of the Treasurer of the United States, in the amounts of $110 and $60, and dated May 21, 1937, were submitted as representing 10 percent of bids for repair work.

(d) Funds Belonging to Aliens (in Deportation and Detention Division) $380.42

Ali Mabaric, a Hindoo, deported April 1, 1932; 1932 notation that "This amount $32.00, was inadvertently overlooked at the time of deportation" ..... $ 32.00

Mate Zyombic, received May 27, 1937, $25—refunded $9—balance ..... $ 16.00

George Gogo, received, July 27, 1937, $250,—refunded $5.—balance 245.00

Yick Pung Chang, received, August 5, 1937,—.... 13.00

Wazir Singh, received, July 20, 1937, $81—refunded $10—balance 71.00

John June (effects of), received March 1, 1931, from A. M. McQuade, nurse in charge, Philadelphia General Hospital, Department of Public Health ..... .06

Louie Sam, arrived by S. S. President Hoover July 14, 1937. Deposit made by a friend in San Francisco for benefit of alien 2.00

Unidentified—	
The sum of $1 in envelope marked "$2.00 found in yard about June 1930. $1.00 given to John Lind 11/5/31", balance	$ 1.00
The sum of 36 cents in bottom of cash box,—source unknown	.36

It was noted that collections received are not deposited currently as received, but are allowed to accumulate until about the middle and near the end of each month. The last deposit is usually made two or three days before the end of the month and items received thereafter are not recorded, deposited, nor accounted for until the ensuing month.

During the period August 1 to 11, 1937, United States bonds in the sum of $500 were received by the immigration officer and transmitted to the Federal Reserve Bank for safekeeping. No current entries of such items are made in the accounting records until the end of the month at which time a list of the bonds received by the said bank is furnished to the immigration officer for inclusion in his accounts. The total of such bonds on deposit with the Federal Reserve Bank, San Francisco, at the close of business August 11, 1937, was reported as being $36,800.

Section 3642, Revised Statutes, requires that—

"All persons charged by law with the safe-keeping, transfer, and disbursement of the public moneys, other than those connected with the Post-Office Department, are required to keep an accurate entry of each sum received and of each payment or transfer."

Pursuant thereto all collections including trust funds and quasi-public moneys received by officers and employees of the United States in their official capacities for or on be-

half of the Government should be currently entered in the records provided and a complete accounting for all such moneys received within the period whether deposited, disbursed, on hand, or in transit, rendered to this office. There is no authority for the practice of withholding from the records, even temporarily entries for collections received by an accountable officer of the Government in his official capacity.

All collections received by the accountable officer of the Immigration and Naturalization Service at San Francisco should be promptly deposited through the Federal Reserve Bank, to his official checking account with the Treasurer of the United States, and accounted for as "special deposits". See sections 3615 and 3621, Revised Statutes, also section 5492, Revised Statutes, as amended (section 177, Title 18, U. S. Code), General Accounting Office General Regulations Nos. 80, 87, Supplement No. 1 of General Regulations No. 40, and Treasury Department Circular No. 176 dated September 2, 1930.

In the event the collections hereinabove enumerated have not been taken into the accountable officer's accounts, the items pertaining to (a) Hospitalization should be deposited on certificate of deposit Treasury Form 1-Revised (through the Federal Reserve Bank of San Francisco), for credit to the appropriation for expenses of regulating immigration for the fiscal year in which the expenses were incurred (U. S. C. 18:176); the items pertaining to (b) Unofficial Use of Telephone Facilities, (c) Deposits to Guarantee Performance of Contracts, and (d) Funds Belonging to Aliens, etc., to whom refund can be made should be deposited on certificate of deposit Treasury Form 6599 and accounted for as special deposits. Moneys belonging to those aliens, etc., to whom refund cannot be made, as for example, Ali Mabaric $32, and the proceeds from the effects of John June should be deposited on Treasury Form

1-Revised for credit to the account "168881-Deposits of Unclaimed Moneys of Individuals whose Whereabouts are Unknown (name of individual)"; while the unidentified items amunting to $1.36 should be deposited for credit to the account "164880-Moneys Received from Persons Unknown".

2. Disbursing officer's checks numbered 1414 to 1420 were on hand signed in blank by Edward L. Haff. It was explained that Mr. Haff, who has no deputy or assistant disbursing officer, was on vacation and had signed the checks so that payment could be made for telegraph messages sent for immigrants and depositors' balances promptly refunded. Mr. Haff apparently did not feel inclined to require another employee to be bonded.

A check on the Treasurer of the United States, uncompleted as to payee and amount, when signed by the recognized disbursing officer and delivered into the custody of another, creates a needless hazard of public funds, which may be for a sum far in excess of the officer's bond. There is no lawful authority for such practice, and a procedure less hazardous should be adopted without delay. In this connection attention is called to Treasury Department Circular No. 423, dated June 2, 1930, which provides for the designation of an employee as an assistant to the specified disbursing officer, with authority to sign official checks drawn on the Treasurer of the United States in the name of such disbursing officer, followed by his own signature. There is also for consideration the desirability of securing authority pursuant to section 3620, Revised Statutes, to carry cash for disbursing purposes. The enforcement of the procedures prescribed for safeguarding the public moneys should not be left to personal preferences of individual employees.

3. Two series of deposit numbers are used concurrently by the depositor (the accountable officer) in preparing certificate of deposit, Treasury Form 1-Revised—one series for repayments to appropriations and the other for miscellaneous receipts.

Treasury instructions printed on the pads of certificates of deposit forms provide that "the 'deposit Numbers' * * * are to be inserted by the *depositor* and should be in numerical sequence, beginning with number 1 on July 1 of each year". The purpose of so numbering is to enable the administrative office, the depositary, the Treasury, and the General Accounting Office, to definitely identify a particular deposit with reference to which a question may have arisen. The numbering of all certificates of deposit (both Treasury Form 1-Revised and Treasury Form 6599) in one consecutive series also permits of readily detecting certificates of deposit not accounted for. The accountable officer should be directed to comply with the aforesaid instructions.

4. Charges for overtime compensation of inspectors, billed on Form No. 571, are collected at the station. The checks therefor, drawn usually on San Francisco banks and made payable to the Commissioner of Immigration and Naturalization, are attached to the original and collection voucher and sent to the Bureau in Washington for deposit, and are not taken into the accounts of the special disbursing agent.

The act of March 2, 1931, 46 Stat. 1467, providing for extra compensation for overtime service directs that it be paid by the master, owner, agent, or consignee of such vessel, etc., arriving in the United States from a foreign port, to the Secretary of Labor who shall pay the same to the several immigration officers and employees entitled thereto. Section 5 of the Permanent Appropriation Re-

peal Act of 1934, 48 Stat. 1228, amended the act of March 2, 1931, supra, to the extent of directing that payment for overtime services would be borne by the annual appropriations. Collections received for such overtime services are therefore for deposit into the Treasury as miscellaneous receipts, account "5315-Immigration Overtime Service".

It is believed that the requirements of law have been satisfactorily complied with if such collections are taken into the accounts of the local accountable officer (special disbursing agent or regional disbursing officer) and deposited in the Federal Reserve Bank or branch bank of the district in which the collection is made, for deposit to the credit of the Treasurer of the United States under the receipt account prescribed. A copy of the schedule of collections on which each collection is listed would then be transmitted to the Immigration and Naturalization Service in Washington (see General Regulations 87). Such procedure not only permits of covering the collections into the Treasury at an earlier date, eliminating the possibility of loss in transit, but insures compliance with section 3615, Revised Statutes, which provides that all collectors and receivers of public money of every description shall pay over to the Treasurer of the United States all public moneys collected by them or in their hands.

5. The station at Angel Island is not provided with telephone pay stations, as the result of which attorneys, aliens, and others use the official telephones to make calls to San Francisco and other points. The charge for each zone message is 3 ½ cents but for personal calls to San Francisco a deposit of 7 cents is required to be made with the telephone operator—the excess, it was stated, being credited to the depositor for a subsequent call. Interzone and long distance tolls are collected in the amounts charged, plus Federal tax. The funds received are turned over about the 20th of each month to the clerk in charge of the

accounts, who takes them into the accounts of the district director as "special deposits". When the monthly telephone voucher is passed for payment the amount on deposit is transmitted by official check to the Commissioner of Immigration and Naturalization in Washington, for payment to the telephone company.

The procedure of collecting for the unofficial use of office telephones and the accounting for the money as "special deposits" follow in a measure that prescribed by this office in General Regulations No. 40, supplements 2 and 3. However, there are several features here disclosed which indicate the need for administrative correction.

First, the regulations, supra, did not contemplate that the telephone facilities subscribed for by the Government would be made available to the general public to the extent here indicated.

Second, there is no authority for collecting excess amounts in anticipation of subsequent calls.

Third, the amounts collected should be taken into the accountable officer's accounts as of the day collected and not held out until the 20th of the month. It may be inferred that collections received during the period from the 21st to the end of the month are not included in the officer's accounts for the month in which collected. See sections 3643 and 3615, Revised Statutes.

Fourth, transmitting to the Washington office with the monthly telephone bill the amount deposited for payment to the telephone company in San Francisco and to the Collector of Internal Revenue (for the Federal taxes) invokes a complicated accounting transaction involving not only the accounts of the special disbursing agent but also those of

the Chief Disbursing Officer, Division of Disbursement, in whose accounts the voucher for the telephone bills is included.

The objectionable telephone procedure can probably be eliminated by authorizing the telephone company to install at the Angel Island Station a public pay station through which all unofficial calls can be transmitted. It is further suggested that in the event the telephone comany installs a public pay station in a Government building in Angel Island Station that arrangements be made with the said company whereby the Government may receive a percentage of the receipts from the said pay station. Such amounts as are collected are for deposit into the Treasury as miscellaneous receipts, account "3230-Commissions on Telephone Pay Stations in Federal Buildings Outside of Washington, D. C."

6. The fresh water requirements of the immigration station at Angel Island are furnished by the War Department whose boat transports the water from Fort Mason, San Francisco, to tanks at Fort McDowell, also located on Angel Island, from which point a pipe line with meter installed has been constructed to deliver water, approximately 14,000 gallons per day, to the immigration station. It is estimated that in order to supply the additional water for the station it requires on extra trip of the boat per week, entailing additional expense of approximately $150 per month. Instead of reimbursing the War Department by check an arrangement was agreed upon whereby the Immigration Service will purchase annually under contract $1800 worth of fuel oil to be delivered to the War Department when needed either in one lot or in two or more installments.

From the foregoing it appears that the cost of the said water to the Immigration and Naturalization station at

Angel Island is approximately 36 cents per 1000 gallons which, it is understood, is not unreasonable under the circumstances. However, the arrangement under which payment for transporting fresh water is made to the Fort McDowell authorities in fuel oil purchased by the Immigration and Naturalization Service involves a principle of purchase and exchange of Government property which obviously is in contravention of the spirit and intent of the statutes regulating the accounting of appropriated moneys.

It is readily apparent that such practice would permit the purchasing and property officers of the Government to procure supplies authorized under their available appropriations and exchange them for other commodities, thereby accomplishing indirectly that which may not be authorized in the appropriation acts.

While in the instant case it now develops that the fuel oil was purchased for use in connection with the transporting of fresh water to the Immigration Station at Angel Island, the official accounting documents with reference thereto on file in this office indicate that the Immigration and Naturalization Service purchased under the Navy fuel oil contracts and paid for from its appropriations certain quantities of fuel oil ostensibly for consumption in vessels of the said service. To that extent the accounting as rendered is fictitious and misleading.

It has long been held that any agency of the Federal Government may furnish supplies, services, etc., to another such agency, if it be in the interest of the Government so to do, and the appropriations are available therefor; the appropriations originally bearing the expense of the said supplies, services, etc., to be reimbursed in the amount of the cost thereof, which shall be payable from the applicable appropriations of the agency for which such supplies, services, etc., were furnished. See U. S. Code, Title 31, Section 686.

Steps should be taken to discontinue the aforesaid practice and instructions issued to reimburse the War Department for the cost of transporting the fresh water required by the Immigration and Naturalization station at Angel Island in the manner prescribed by this office in General Regulations No. 78-Revised.

7. Employees assigned to duties at the Angel Island Station are provided with transportation from San Francisco (pier No. 5) to Angel Island on the Government steamer *Angel Island* which operates on the following schedule:

Trip No.	1	2	3	4	5
	A. M.	A. M.	A. M.	P. M.	P. M.
Lv. San Francisco	7:30	8:45	10:30	1:00	3.45
Lv. Angel Island	8:05	9:45	12:10	2:30	4:30

Practically all of the said employees leave San Francisco on the 8:45 a. m. trip (which requires about ½ hour) and about 9:30 a. m. are at their desks. The closing bell rings at 4:20 p. m. to allow the employees time to put up their work and reach the boat which departs at 4:30 p. m. On Saturdays the closing bell rings at 12 noon making the actual time on duty (from 9:30 a. m. to noon) 2½ hours.

The hours of duty of Government employees in San Francisco are generally from 9 a. m. to 4:30 p. m. with one-half hour for lunch and on Saturdays from 9 a. m. to 1 p. m., and it appears that regulations issued by your Department to the field service under date of June 13, 1936, contemplate that duty of 39 hours per week is required of this class of employees. It will be seen from the foregoing that the loss of time to the Government per employee of the Angel Island Station amounts to about 5 hours a week.

While section 5 of the act of March 3, 1893, as amended by section 7 of the act of March 15, 1898, 30 Stat. 316, requiring "not less than seven hours of labor each day, except Sundays and days declared public holidays by law or Executive order" has been held (15 Comp. Gen. 1056) not to be applicable to employees in the field service, there is for consideration the act of March 3, 1931, which provides that with certain exceptions not here involved "on and after the effective date of this Act [March 3, 1931] four hours, exclusive of time for luncheon, shall constitute a day's work on Saturdays * * * for all civil employees of the Federal Government".

In this connection attention is also called to the provisions of the "vacation" and sick leave" acts of March 14, 1936, 49 Stat. 1161 and 1162, respectively, and to Executive Order No. 7409 dated July 9, 1936, prescribing regulations thereunder which specifically provide that employees shall be charged with minimum annual leave of 15 minutes when absent from their work.

As the shortening of the work day at the Angel Island Station is due to the boat schedules, supra, it is suggested that consideration be given to a revision thereof so that the employees may be at their designated posts for the required number of hours each day. Also, in view of the fact that the amount of annual leave for field employees is now definitely fixed and limited by the act of March 14, 1936, 49 Stat. 1161, and the regulations thereunder which make the granting of leave mandatory, it is essential that the same care be exercised in maintaining accurate detailed records of all leave taken, as is required for other objects of expenditure.

Advice as to the action taken will be appreciated.

Respectfully,

(Signed) R. N. ELLIOTT,

Acting Comptroller General of the United States.

Department of Labor
Office of the Secretary
Washington

55685/667-A
November 22, 1937.

Honorable R. N. Elliott,
Acting Comptroller General of the United States,
Washington, D. C.

Sir:

I have before me your letter of the 28th ultimo, A-44009, addressed to the Secretary of Labor, with reference to the method by which accounts and other matters relating to the operation of the Immigration and Naturalization Service at the port of San Francisco, California, at the time of inspection, August 11, 1937, were kept.

The several topics have been brought to the attention of the Commissioner of Immigration and Naturalization and the following is the substance of his reply as to each: Collections not taken into the records at time of inspection, August 11, 1937:

The District Commissioner at San Francisco, California, has been instructed to follow the procedure outlined on page 3 of your letter with respect to depositing currently funds collected for hospitalization of aliens, deposits to guarantee performance of contracts, funds belonging to aliens in deportation cases, and other collections, including trust funds and quasi-public moneys received by him. It appears from his Account Current for October 1937 that he is following the procedure prescribed by your office.

Disbursing officer's checks signed in blank:

"We are pleased that you have brought this matter to our attention as we were not aware that the District Director

had adopted such an arrangement, although it appears to have been his intention to facilitate the payment of funds to aliens while he was absent on annual leave. Instructions have been issued to discontinue the practice immediately.

The District Director also has been instructed to designate an employee as assistant to him, in accordance with Treasury Department Circular No. 423, dated June 2, 1930.

Cash balance for disbursing purposes:

The desirability of securing authority pursuant to section 3620, Revised Statutes, to carry cash for disbursing purposes, has been submitted to the District Commissioner for recommendation and your office will be further advised in this regard.

Use of two series of deposit numbers:

Instructions have been issued to the District Commissioner to discontinue this practice.

Collections on account of overtime services:

The present procedure for the handling of collections for overtime services of inspectors was established after discussion with your office, and the Commissioner of Immigration and Naturalization feels that the method now followed should not be changed as it has been in effect since 1931 and is working satisfactorily. However, the matter will be given further study and a supplemental report will be submitted to you in due course.

Extension of telephone facilities to the general public visiting Angel Island:

The District Commissioner at San Francisco has been instructed to contact the telephone company with a view to the installation of pay stations on Angel Island under

arrangements whereby the Government may receive a percentage of the receipts therefrom.

Arrangement with War Department for the transportation of fresh water to Angel Island:

The existing arrangement for the transportation of fresh water was entered into on September 30, 1924, in the interests of economy, with the approval of the former Chief Coordinator H. C. Smither, former Second Assistant Secretary of Labor Robe Carl White and former Secretary of War John W. Weeks. However, in accordance with your recommendation, instructions have been issued to the District Commissioner whereby the War Department will be reimbursed for the cost of transporting the fresh water required at Angel Island, in accordance with the manner prescribed by you in General Regulations No. 78-Revised. Schedules of ferryboat "Angel Island":

The District Commissioner has been instructed to readjust sailing schedules so that employees may be at their designated posts of duty for the required number of hours each day or be charged with the necessary annual leave to cover absences during the work period, in accordance with the provisions of the vacation and sick leave acts of March 14, 1936, and Executive Order of July 9, 1936.

I desire to assure you that this office appreciates your action in bringing the foregoing matters to its attention and and that it will be pleased to cooperate in every possible way in maintaining proper accounting records.

Respectfully,

(Signed) RICHARDSON SAUNDERS,
(Richardson Saunders)
Assistant to the Secretary.

Comptroller General of the United States
Washington

A-44009 October 9, 1939.

The Honorable
The Secretary of Labor.

Madam:

Investigation by representatives of this office of the accounts and records of the Angel Island Station Immigration and Naturalization Service, San Francisco, Calif., brings out matters to which it is considered advisable to invite your attention and which are reported substantially as follows:

1. Approximately every seven weeks a group of aliens subject to deportation is brought to San Francisco from New York (Ellis Island) and way stations by a deportation officer connected with the Washington office. As aliens are turned over to the deportation officer by authorities along the route of travel, it becomes necessary for the deportation officer to take physical possession of funds and valuables for safe-keeping until such time as the aliens are delivered in San Francisco. The money and effects are placed in personal-property envelopes and these containers along with deportation and transfer documents are carried in one large manila envelope. The transcontinental train arrives in San Francisco about 10 p. m. and is met by Mr. J. X. Strand, inspector-in-charge of the Deportation and Detention Division at Angel Island. Mr. Strand accepts from the officer in charge of the group the large envelope containing the official papers and 'aliens' funds and as no provision has been made for safeguarding such funds Mr. Strand is obliged to take the money to his home on the mainland where it is kept overnight and carried on his person to Angel Island the following morning. The aliens

are kept in the guarded railroad cars at the San Francisco terminal of the Southern Pacific Railroad the night of arrival and are not turned over to the local immigration authorities until the following morning, being transferred to Angel Island by Government boat. Neither Mr. Strand nor the deportation officer in charge of transporting the aliens is bonded for safeguarding funds entrusted in their care.

A similar condition exists in connection with transfer of aliens from Seattle, Wash., and Portland, Oreg. Such deportation parties from the north arrive at Oakland in the evening and, as there is no special car in which they can be detained overnight, they are met at a pier on the Oakland-Berkeley side of the bay and transferred to Angel Island by launch. The money and valuables in possession of the guards with arriving aliens are delivered to the Angel Island guard who issues a receipt for the property. The guards from Seattle or Portland apparently proceed to San Francisco, to begin their 24-hour rest period that night. The local guard, however, is entrusted with the funds until his shift is ended at midnight when it becomes necessary to turn the property over to his successor on the 12:01 to 8 a. m. shift. Then at 8 o'clock the third guard receives the money and effects for safe-keeping until such time as they can be turned over to the agent-cashier, the bonded officer.

The reported situation warrants prompt administrative action to terminate a procedure under which employees are permitted to retain possession of funds, for which the United States is responsible, on their person or in their homes. Due to the arrival of the aliens and their funds at San Francisco and Oakland, Calif., after the usual business hours, there is recognized the administrative problem of effecting the transfer of the funds from the guards to the agent-cashier at Angel Island, who is a responsible bonded offcer, but no reason is apparent why such funds cannot be forwarded to the agent cashier through the use of the post-office facilities. There is suggested for your

consideration the issuance of instructions which will require that the funds of aliens transferred from Ellis Island, N. Y., Seattle, Wash., Portland, Oreg., and intermediate points to Angel Island be mailed directly to the responsible officer at the point of destination.

2. In the previous report of inspection it was stated that telephone pay stations are not provided for the public, as the result of which attorneys, aliens, and others use the official telephones to make calls to San Francisco and other points. The charge to the Government for each zone message is 3½ cents but for personal calls to San Francisco a deposit of 7 cents is required, the excess being credited to the depositor for a subsequent call. Subsequent thereto the Government installed a public pay station and now charges the public 5 cents for each zone call to San Francisco. The flat charge of 5 cents should result in revenue to the Government but the Angel Island Station takes advantage of the 1½ cent profit by paying to the telephone company all funds received and thus reducing the station's monthly telephone bill accordingly.

Collections from the Government-owned public pay station are transmitted to the San Francisco regional disbursing office as special deposits where they remain to the official credit of G. F. Allen, symbol 891-820, "0337.13 Miscellaneous Items" until the monthly voucher for telephone service is submitted to Washington for payment. When preparing the voucher the clerk at Angel Island debits "Special Deposits" with the nearest multiple of 3½ cents that will expend the amount on deposit with the regional disbursing office, and charges the balance of the statement to the appropriation. As the voucher thus prepared becomes payable in part from special deposits held by the regional disbursing officer, and in part by appropriated moneys advanced to the Chief Disbursing Officer in Washington, it is necessary for the Washington of-

fice to request by radio a transfer of funds to symbol 891-804 from the regional disbursing office (symbol 891-820) before payment can be accomplished.

It would thus appear that the practice of applying the total amount of special deposits, representing the flat charge to the public of 5 cents per call over the Government-installed public pay station has the effect of reducing the station's monthly telephone bill for official calls, which practice augments the regular appropriation to the extent of the 1½ cents representing commissions received. Periodic bills for telephone service are payable from appropriated funds for official calls and from special deposits for services over the public pay station only to the extent of the cost of operation, but amounts in excess of such operating costs representing commissions of 1½ cents per call at Angel Island are for deposit into the Treasury as miscellaneous receipts, account "3230—Commissions on Telephone Pay Stations in Federal Buildings Outside of Washington, D. C."

3. The 39-hour-weekly employees are working approximately 6 hours 55 minutes from Monday to Friday and 2 hours 55 minutes on Saturday, a total of 37½ hours to conform to a transportation schedule as follows:

"Trip No.	1	2	3	4*	5
Leave	A. M.	A. M.	A. M.	P. M.	P. M.
San Francisco	7:30	8:45	10:30	1:00	3:30
Leave			P. M.		
Angel Island	8:05	9:45	12:10	2:30	4:35

* Except Saturdays."

The matter of permitting employees at Angel Island Station to be at their post of duty for less than the required number of hours was brought to your attention in letter of

this office, dated October 28, 1937, in which it was suggested that consideration be given to a revision of existing steamer schedule so that employees could be at their post for the required number of hours. In reply thereto it was stated that—

"The District Commissioner has been instructed to readjust sailing schedules so that employees may be at their designated posts of duty for the required number of hours each day or be charged with the necessary annual leave to cover absences during the work period, in accordance with the provisions of the vacation and sick leave acts of March 14, 1936, and Executive Order of July 9, 1936."

Since the official duty hours of Government employees may not be administratively reduced without a compensating adjustment in their available annual leave or compensation, it is again suggested that action be taken to adjust the operating schedule of the Government steamer.

Advice as to the action taken will be appreciated.

Respectfully,

(Signed) FRED H. BROWN,
Comptroller General of the
United States.

U. S. Department of Labor

Immigration and Naturalization Service
Washington

55685/667-A

November 2, 1939.

Honorable Fred H. Brown,
Comptroller General of the United States,
Washington D. C.

Sir:

Under date of October 9, 1939 (A-44009), you advised this Department that an investigation of the accounts and

records of the Angel Island Station, Immigration and Naturalization Service, San Francisco, California, brought out certain matters which required adjustment and requested advice as to the action taken in the premises.

The action taken with respect to the several matters referred to by you is as follows:

(1) *Personal property and funds of alien deports.* The District Director of Immigration and Naturalization at San Francisco has been instructed to discontinue the practice of having an officer take these funds to his home for safekeeping and to arrange for the agent cashier or his alternate, both bonded officers, to meet the trains upon arrival, take over the custody of these funds and valuables, place them in a locked bag, and transport them via the night boat to Angel Island for safekeeping.

(2) *Telephone collections.* Collections from the Government-owned pay station in excess of the contract rate of 3½c will be deposited into the Treasury as "Miscellaneous Receipts", account "3230—Commissions on Telephone Pay Stations in Federal Buildings Outside Washington, D. C."

(3) *Hours of duty of employees.* The morning boat schedule will be advanced from 8:45 a. m. to 8:40 a. m., and the afternoon boat will leave the Island at 4:35 p. m. Moreover, in accordance with a ballot vote of the majority of the employees at that station, the lunch period will be fifteen minutes instead of thirty minutes. This will provide a total of twenty-five minutes additional working time, except Saturday. On Saturday departure of the boat will be deferred until 1:15 p. m., in order to provide for a four-hour minimum working period on that day.

Incidentally, attention is called to the fact that it is exceedingly difficult to make adjustments in the ferry boat schedule because the Service marine force, who are eight-hour employees, is sufficient to properly man but one vessel on a daily schedule basis. The SS Angel Island is berthed at Pier 5, San Francisco, and maintains ferry service starting the first trip at 7:30 a. m. and finishing the last trip at Pier 5 at about 5:00 p. m. Preliminary preparations demand the reporting of the fireman at 6:00 a. m. and others of the crew at 7:00 a. m. and 7:15 a. m., and closing arrangements require same to report off duty at 5:15 p. m. or later. While duty periods are staggered insofar as possible, all marine employees are compelled to work overtime under the present schedule.

Respectfully,
(Signed) JAMES L. HOUGHTELING,
(James L. Houghteling)
Commissioner.

Comptroller General of the United States
Washington

A-44009 August 20, 1940.

The Honorable,
The Attorney General.

Sir:

By office letter of October 28, 1937, and again by office letter dated October 9, 1939, there was called to the attention of the Secretary of Labor the fact that the weekly hours of duty of the employees of the Angel Island Station, Immigation Service, were less than 39, and the usual number of hours worked per week by other Federal employees in the same locality, apparently with the approval or acquiescence of the administrative authority. It was administratively reported that the shorter weekly hours were

necessary in order (1) that the employees may be transported to and from their post of duty by the only means of transportation available—a ferryboat or steamer operated by the Government, and (2) that the employees be excused on Saturday at noon because of the California State half holiday beginning at noon on Saturday.

It is understood that, at the suggestion of this office, a change was made in the ferryboat schedule, resulting in an increase of the hours of work of the employees, but that it now is deemed essential for administrative reasons to return to the old ferryboat schedule and hours of work.

The fixing of the number of hours of work per week for field employees, as well as the determination of whether a particular class of such employees should be at their desks during the tour of duty administratively fixed, are matters primarily for administrative consideration, as is, also, the duty of carrying out the provisions of the act of March 3, 1931, 46 Stat. 1482, which prescribes four hours as the maximum number of hours' work on Saturday. Therefore, whatever action has been or may be taken to bring about uniformity in the hours of duty with respect to field employees of the Immigration Service in the San Francisco area must be the action of the administrative office, that is, by or under your direction. It may be said, however, that if the shortening of the work week of these particular employees on duty at Angel Island is deemed by your Department to be essential, due to the unusual existing conditions, this office will interpose no further objection thereto.

Respectfully,
(Signed) R. N. ELLIOTT,
Acting Comptroller General of
the United States.

Department of Justice
Washington

October 3, 1940.

The Honorable,
The Comptroller General of the United States,
Washington, D. C.

Sir:

Reference is made to your letter dated August 20, 1940 (A-44009), wherein you call attention to previous correspondence with the Secretary of Labor to the effect that the employees of the Angel Island Station of the Immigration and Naturalization Service have devoted fewer hours of duty than that of other Federal employees in the same locality.

You are advised that steps are being taken by this Department to establish standard offices hours at the Angel Island Station.

Sincerely yours,
(Signed) T. D. QUINN,
Administrative Assistant To
the Attorney General.

(This volume, pages 4693 to 4903 was designated as Exhibit B to the designation of the Record by Appellants.)

Exhibits Identified and Offered in Evidence by Plaintiffs, Objections Made to Their Introduction by Defendants Sustained and Admission in Evidence Refused.

4606 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 32.

Plaintiffs' Exhibit No. 32 for Identification is a printed booklet consisted of 12 numbered pages and cover, entitled, "United States Fuel Administration Agreement and

Award of Arbitration Committee for Mines in Southeastern Kentucky and East Tennessee, Knoxville, Tennessee, November 10, 1917."

The Agreement and the Award is dated September 29, 1917, and is directed "To the Representatives of the Operators and the Mine Workers of Southeastern Kentucky and Eastern Tennessee," and purports to be signed by Rembrandt Peale, Umpire, and E. C. Mahan, L. C. Gunter, Van A. Bittner and William Feeney, Special Arbitration Committee, and bears the following: "Approved: H. A. Garfield, Fuel Administrator, Washington, D. C., November 6, 1917."

The Agreement and Award relates to wages, hours of labor and working conditions and other matters relating to employer and employee relationships. Included is the following provision:

"Hours of Labor and Working Conditions: The number of hours constituting a day's work shall be reduced from ten (10) hours to eight (8) hours. The wages scale as above outlined is based on eight hours work.

"It is agreed that blacksmiths, blacksmiths' helpers, power house, power station employees, pumpman and teamsters will, when desired by the operators, work as much as ten hours per day, they to be paid for the extra time at the same proportionate rate per hour. In event of emergencies all classes of labor are to work extra time when called upon at the same proportionate rate per hour.

An eight (8) hour day means eight hours work at the usual working place of all classes of employees. This shall be exclusive of the time required in reaching such

working places in the morning and departing from the same at night.

"To insurance eight (8) hours' work the labor necessary to transport men to and from working places are to follow practices heretofore in use for that purpose.

"Drivers shall take their mules to and from the stable at the time required, and the time in so doing shall not include any part of the day's labor."

4608 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 31.

Plaintiffs' Exhibit No. 31 for Identification is a printed booklet consisting of 7 numbered pages and cover, entitled, "Recommendations of United States Fuel Administrator, December 14, 1917," and containing an acceptance dated Birmingham, Alabama, January 28, 1918, by the Alabama Coal Operators of the Suggestions made by Rembrandt Peale, representing the United States Fuel Administrator, in his letter dated Washington, D. C., December 14, 1917, and also containing the recommendations of the United States Fuel Administration as set forth in said letter dated Washington, D. C., December 14, 1917, said recommendations relating to a number of matters in dispute between the coal operators and coal mine workers of Alabama, one of such recommendations being in words and figures as follows:

"12th. The United States Fuel Administrator urges upon the Operators and Mine Workers of Alabama that the question of the hours of labor that constitute the day's work be settled and agreed upon in the terms set forth in the Operators' public statement of December 6th, 1917, published December 10th, 1917, as follows:

'the operators are willing to put in effect in Alabama, for the duration of the war, if you desire it done, the working hours now in force in the Tennessee-Kentucky field; that is, employees shall be at their working places at 7:30 a. m., and shooting time in the mines shall be 4:00 p. m., with not more than thirty minutes to be consumed by employees in lunch or dinner hour. Day labor necessary for the transporting and dumping of coal that may be in transit at quitting time shall continue working until such coal is loaded on railroad cars, it being understood that no more than one-half hour may be required for this work, which will be performed by the necessary day labor involved without additional compensation.'"

4609 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 46.

Copy.

The White House.

Washington, 19 March, 1920.

Gentlemen:

I am transmitting to you herewith a copy of the report and award of the Bituminous Coal Commission appointed to adjust matters in controversy between the bituminous coal miners and operators of the country.

In accordance with instructions in my letter of appointment to the Commission and memoranda attached thereto and the agreements by mine workers and operators to abide by the report and award of the Commission, this report and award is the basis upon which the wage sched-

ule agreements between the mine workers and operators shall be made.

Operators and miners should, therefore, make arrangements for convening the necessary joint conferences as soon as possible to make such changes in the terms, provisions and conditions, mining rates and wage schedules as are set forth in this report and award.

It is essential to the public welfare that the agreements be concluded at the earliest date practicable so that the uncertainty as to fuel supply may be ended and that consumers may be able to make contracts for their coal supply and also that the recommendations contained in the report as to the storage of coal by consumers may be of service this year.

I also inclose as information copy of minority report by one member of the Commission. This minority report concurs with the report of the Commission as to wage for miners, though dissenting as to wage for day workers, and in part concurs and in part dissents on other points. I regret that the members of the Commission were not unanimous on all points as I had expressed the hope they would be, but the report of the majority is none the less the report of the Commission and binding as such.

I take it that neither party will raise any question, and I am sure that no question can properly be raised, as to the binding character of the award, notwithstanding the fact that it is not unanimous. On December 10th, 1919, the miners, without qualification, agreed to submit all questions to a decision of a commission of three persons to be appointed by me, the report of such commission to be made the basis of a new wage agreement. This definite and unqualified acceptance did not in any way limit the power which any such commission is always understood to have, in the absence of agreement to the controversy, that it may reach a decision by ma-

jority vote. The acceptance of the operators was equally unqualified on this point. This condition was in no wise changed by my subsequent action on December 19th, in expressing a belief as to the desirability of importance of unanimous action.

My appointment of the Commission indicated that the power to fix the price of coal would not be conferred upon the Commission except for its unanimous action and therefore it is clear that such power to fix coal prices should not be conferred on the Commission.

I have carefully considered the question whether the war power of the Lever Act should be temporarily invoked by me, despite the absence of any action of the Commission so recommending, to continue temporarily the control of prices, and have concluded that it is not expedient for me to exercise any such price fixing control so that, on and after April 1st, 1920, no Government maximum prices will be enforced.

There is at present no provision of law for fixing new coal prices for peace time purposes, and unless and until some grave emergency shall arise, which in my judgment has a relation to the emergency purposes of the Lever Act, I would not feel justified in fixing coal prices with reference to future conditions of production.

I am aware that at present, as a result of the shortage created by the coal strike, and of the consequent interference with transportation and as a result, also of the exceptionally unfavorable winter, the demand for coal continues active. I desire to impress upon the coal operators the extreme importance of not only of their complying to the fullest extent with the laws against combinations in restraint of trade and against profiteering, but also of their exerting themselves affirmatively to prevent exacting of unreasonable prices for coal. I am sure the public fully appreciates the desirability, where practicable, of leaving commercial transactions untram-

meled but at the same time I am satisfied the public will find ways to protect itself if such liberal policy shall appear to result in unreasonably high prices.

Sincerely yours,
(Signed) WOODROW WILSON.

G. B. McCormack, Esq.,
President Alabama Coal Operators, Asso.,
1303-5 American Trust & Savings Bank Bldg.,
Birmingham, Alabama.

John Kennamer, Esq.,
President, District #20,
913-14 Farley Building,
Birmingham, Alabama.

4612 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 33.

Plaintiffs' Exhibit No. 33 for Identification is form of the agreement executed between United Mine Workers of America, District 20, and coal operators of Alabama (Tr., Vol. 10, P. 1458), known as the Beltona Contract, being an agreement covering hours of labor, conditions of employment, etc., consisting of four typewritten pages, and containing, among other provisions, the following:

"Hours of Labor: An eight-hour day will be in effect, which means eight hours actual work at the usual working places. The time required in going to and from the usual working places shall not be considered a part of the eight-hour day. Starting time will be not later than seven A. M. with not more than thirty minutes for lunch.

"Employment of Miners: All miners will be directly employed by the company and all coal mining will be paid for at tonnage rates provided for in this agreement."

4613 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 14.

Plaintiffs' Exhibit No. 14 for Identification is a printed pamphlet consisting of sixteen printed pages and cover, the title page being as follows: "Approved Code No. 24—Reprint; Registry No. 702-45. National Recovery Administration—Code of Fair Competition for the Bituminous Coal Industry as Approved on September 18, 1933, by President Roosevelt. Includes Amendments 1-3 Incl."

The pertinent portions thereof are as follows:

Approved Code No. 24.

Code of Fair Competition for the Bituminous Coal Industry

As Approved on September 18, 1933 by President Roosevelt.

Executive Order.

"An application having been duly made, pursuant to and in full compliance with the provisions of Title I, of the National Industrial Recovery Act, approved June 16, 1933, for my approval of a Code of Fair Competition for the Bituminous Coal Industry, and hearings having been held thereon and the Administrator having rendered his report containing an analysis of the said Code of Fair Competition together with his recommendations and find-

ings with respect thereto, and the Administrator having found that the said Code of Fair Competition complies in all respects with the pertinent provisions of Title I of said Act and that the requirements of clauses (1) and (2) of subsection (a) of Section 3 of the said Act have been met:

Now, Therefore, I, Franklin D. Roosevelt, President of the United States, pursuant to the authority vested in me by Title I of the National Industrial Recovery Act, approved June 16, 1933, and otherwise, do adopt and approve the report, recommendations, and findings of the Administrator and do order that the said Code of Fair Competition be and is hereby approved, subject to the following conditions:

* * * * * * * * *

FRANKLIN D. ROOSEVELT.

Approval recommended:
HUGH S. JOHNSON,
Administrator.

The White House,
September 18, 1933.

"September 17, 1933.

General Hugh S. Johnson,
Administrator, National Recovery Administration,
Washington, D. C.

"Dear Sir:

I presenet herewith for your consideration and recommendation to the President the Code of Fair Competition for the Bituminous Coal Industry.

"Efforts were under way to secure the cooperation of the Bituminous Coal operators prior to and in anticipation of the passage of the National Industrial Recovery Act.

"The state of utter disorganization in the industry involving the prevalence of unfair competitive practices, particularly in the payment of low wages in order to permit of unreasonably low coal prices, furnished a good example of the effects of unrestrained competition in an industry capable of great over-production in relation to existing consumer demands. In numerous ways the Bituminous Coal Industry has furnished more convincing evidence of the need for the integrating force of the National Industrial Recovery Act than any other industry in the nation.

"The initial and immediate activity of the Administrator and the present writer after your appointment was an effort to bring about a greater coordination and cooperation between the operators in the different sections of the country in this industry and largely in response to this effort there came into being the Northern Coal Control Association and the Smokeless Appalachian Coal Association, representing almost all producers in the Appalachian coal area which produces approximately 70% of the national Bituminous Coal Tonnage. These associations join in presenting a Code of Fair Competition, this being a remarkable exhibition of cooperation among coal produces who have been engaged for a generation in bitter competitive operations. Other associations in various regions presented separate Codes as did certain groups of individual producers thus offered to the Administration the problem of harmonizing in some manner the divergent views represented in some twenty-eight different Codes.

"This industry also presented the unique problem of one in which there was far-reaching organization of labor on an industrial basis. The United Mine Workers of

America having contracts with many operators in many fields and claiming organization of workers in many other fields where no contractual relations existed.

"The difficulty of reconciling all the conflicting elements in this situation can hardly be overemphasized. During the progress of discussion following the public hearings representatives of the Appalachian Associations requested the aid of the Administration in facilitating the negotiation of a contract between these associations and the United Mine Workers of America, and it was evident to the Administration that this step having been taken a successful conclusion to these negotiations was of the utmost importance in bringing about the submission of a code for the industry as a whole.

* * * * * *

"The Code as recommended complies in all respects with the pertinent provisions of Title I of the Act. The groups submitting the code impose no inequitable restrictions on admission to membership therein and were truly representative of the Bituminous Industry.

"The Code as recommended is not designed to promote monopolies or to eliminate or oppress small enterprises and will not operate to discriminate against them, and will tend to effectuate the policy of Title I of the National Industrial Recovery Act.

"From evidence adduced during the hearing and all available information, it is believed that this code as now proposed and revised represents an effective, practical, equitable solution for this industry, and its approval as herewith submitted is recommended.

"Respectfully submitted,
K. M. SIMPSON,
Deputy Administrator.

Approved:
HUGH S. JOHNSON,
Administrator.

Code of Fair Competition

for the

Bituminous Coal Industry.

Article I—Purposes.

To effectuate the policies of Title I of the National Industrial Recovery Act, the following provisions are submitted as a Code of Fair Competition for the bituminous-coal industry and upon approval by the President shall be the standards of fair competition for this Industry.

Article II—Definitions.

As used in this Code the term "Industry" as applied to the Bituminous Coal Industry means the production and original sale of all kinds of coal (except anthracite), lignite, and the production and original sale of coke other than by-product coke.

The term "employer" includes any person employing labor in any phase of the industry.

The term "employee" includes all persons employed in the industry.

The term "Administrator" means the official designated by the President to administer the National Industrial Recovery Act.

Article III—Maximum Hours of Labor.

No employee, except members of the executive, supervisory, clerical, technical and confidential personnel, shall

be employed in excess of seven hours per day and five days per week, subject to the exceptions hereinafter stated.

Seven hours of labor shall constitute a day's work and this means seven hours work at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid on the day or the tonnage or other piecework basis; except in cases of accident which temporarily necessitate longer hours for those required on account thereof; and also excepting that number of workers in each mine whose daily work includes the handling of man-trips and those required to remain on duty while men are entering and leaving the mine.

* * * * * * *

Article IV—Minimum Rates of Pay.

From April 1, 1934 to April 1, 1935 the basic minimum rate for inside skilled labor and the basic minimum rate for outside common labor shall be the rate hereinafter set forth in Schedule "A" for each district therein described for each such classification of labor, with the understanding that other classifications of employees will maintain their customary differentials above or below said basic minimum rates.

To secure the parity between minimum rates for day labor and minimum pay for work performed on a tonnage or other piece work basis, the latter shall be determined by the following increases over existing rates in all of the Districts of Schedule "A" except as hereinafter expressly provided:

On the basis of the 2,000 pound ton, an increase of 10 cents per ton for pick mining; 8 cents per ton for machine mining; an increase of 1 cent per ton for cutting, and for all yardage and dead-work rates an increase of 9 percent.

In addition to the increase above provided the minimum rates for tonnage and other piece work in Districts B, G, H, J and J-1, shall be further increased by an amount sufficient to maintain the parity between pay for such tonnage and piece work and the basic minimum rates for day labor as prescribed for such Districts in Schedule "A"[2].

* * * * * * * *

[2] Amendment No. 1.—Approved Mar. 31, 1934.

SCHEDULE A.

Basic Minimum Rates.

	Basic Minimum Rates			
	Minimum Inside Skilled Labor		Minimum Outside Common Labor	
	Per Day	Per Hour	Per Day	Per Hour
District A:				
Pennsylvania	$5.00	$0.714	$4.00	$0.571
Ohio	5.00	.714	4.00	.571
Lower Peninsula of Michigan	5.00	.714	4.00	.571
Panhandle District of West Virginia	5.00	.714	4.00	.571
District B:				
Northern West Virginia	5.00	.714	4.00	.571
District C:				
Southern West Virginia	4.60	.657	3.60	.514
Eastern Kentucky	4.60	.657	3.60	.514
Upper Potomac District of West Virginia	4.60	.657	3.60	.514
Maryland	4.60	.657	3.60	.514
Virginia	4.60	.657	3.60	.514
Northern Tennessee	4.60	.657	3.60	.514

	Basic Minimum Rates			
	Minimum Inside Skilled Labor		Minimum Outside Common Labor	
	Per Day	Per Hour	Per Day	Per Hour
District D: Indiana	4.57	.655	4.20	.600
District E: Illinois	5.00	.714	4.00	.571
District F:				
Iowa	4.70	.671	4.00	.571
Wayne and Appanoose Counties, Iowa	4.56	.651	4.00	.571
District G:				
Missouri, Kansas, Arkansas and Oklahoma, except shaft, drift, or slope mines in those states	4.35	.621	3.75	.536
Shaft, drift and slope mines in Missouri, Kansas, Arkansas and Oklahoma	4.00	.571	3.53	.504
District H: Western Kentucky	4.60	.657	3.75	.536
District J:				
Alabama	3.80	.542	2.80	.400
Georgia	3.80	.542	2.80	.400
Southern Tennessee, Hamilton and Rhea Counties	3.80	.542	2.80	.400

District J-1: Marion, Grundy, Sequatchie, White, Van Buren, Warren and Bledsoe Counties in the State of Tennessee	4.24	.604	3.24	.462
District K:				
New Mexico	5.10	.728	4.10	.586
Southern Colorado	5.10	.728	4.10	.586
District L: Northern Colorado	5.25	.750	4.25	.607
District M: Utah	5.44	.777	4.48	.640
District N:				
Southern Wyoming	5.42	.775	4.44	.635
Northern Wyoming	5.42	.775	4.54	.649
District O: Montana	5.63	.805	4.82	.689
District P: Washington	5.40	.771	4.00	.571
District Q:				
North Dakota	4.50	.643	3.70	.529
South Dakota	4.50	.643	3.70	.529

4620 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 25.

1617 Pennsylvania Boulevard,
Philadelphia, Pa., July 9, 1940.

Col. Philip B. Fleming, Administrator,
Wage & Hour Division,
Department of Labor,
Washington, D. C.

Dear Mr. Administrator:

As a result of certain investigations which have been conducted by the Wage & Hour Division at bituminous coal mines in Pennsylvania, particularly at the Revloc shaft of the Monroe Coal Mining Company, and a conference that has been held by your Supervising Inspector, Mr. Caffey, at Pittsburgh, Pa., with a committee of the Western Pennsylvania Coal Operators' Association concerning the application of the Fair Labor Standards Act of the bituminous coal mining industry, certain questions have arisen that are disturbing to both employers and employees within the industry. These uncertainties have been continuing for some time and are causing much concern to the mine workers and the mine operators, especially with reference to "travel time".

Today, the Negotiating Committee of the Appalachian Wage Conference, namely: Messrs. J. D. A. Morrow, President of Pittsburgh Coal Company; L. T. Putnam of the Raleigh Wyoming Mining Company, Beckley, W. Va.; L. C. Gunter of the Southern Appalachian Coal Operators' Association, Knoxville, Tenn.; Charles O'Neill, President of United Eastern Coal Sales Corporation, New York City; C. E. Cowan, Vice President of Monroe Coal Mining Company; Frederick H. Knight, Counsel for Monroe Coal Mining Company; W. L. Robinson, President of the Youg-

hiogheny & Ohio Coal Company and Chairman of the Appalachian Wage Conference on the one hand, and Mr. Earl E. Houck, Director of the Legal Department of the United Mine Workers of America, met with Mr. Dorsey, Regional Director, Philadelphia, Pa., and Mr. Gallagher, Regional Counsel, Philadelphia, Pa., at which time these questions were discussed at length, particularly the application of the Act as to the questions of hours of work in the bituminous coal industry.

The mine workers and the mine operators present presented their views to representatives of the Wage and Hour Division as to the provisions of the Appalachian Wage Agreement covering maximum hours and working time. We have filed with the Division copy of the Appalachian Wage Agreement, and the entire provision as to maximum hours and working time is included therein. The pertinent language, however, is "Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis * * *." The Appalachian Wage Agreement is the basic agreement for the bituminous mines in the States of Pennsylvania, Ohio, West Virginia, Virginia, Eastern Kentucky, Southeastern Tennessee and Maryland. In this territory there are several thousand rail shipping mines employing from 300,000 to 325,000 men, and some twenty-three operating districts. Each of the districts work out a local wage agreement covering its own territory, subject, however to the provision that it must include within it all of the provisions of the Appalachian Agreement.

The mines in the Appalachian region produce 70% of the total bituminous coal produced in the United States annually. Also, the Appalachian Agreement is used by the United Mine Workers of America as a basic agree-

ment upon which the district agreements of the remaining 30% of the country is predicated.

The United Mine Workers of America and coal operators of the United States have been negotiating wage agreements for a period of fifty years. The Appalachian Agreement, covering as it does a great number of men and mines, has been worked out over that period of time and covers within its general provisions myriad wage rates, conditions of work, and hours of employment. This agreement, with its twenty-three supplemental agreements, constitutes a whole document. In these conferences, ~~of course, hours~~ of work has been one of the principal matters of consideration during this period of time. Hours of work with wage rates constitute the heart of any such agreement. In this basic industry we have provided for seven-hour days, five-day weeks, thirty-five hours per week, with high rates of pay. The basic inside a day rate in the North is $.857 per hour, and in the South it is $.80 per hour. The underground workers are paid on this basis; with maximum rates for mobile loading machine operators, approximately $1.09 per hour. In addition, the agreement provides, "work by mine workers paid by hour or day in excess of seven hours in one day, or thirty-five hours in any one week, shall be paid for at the rate of time and one-half * * *." It is our opinion that these substantive provisions of the agreement are among the highest standards of labor provided in any industry in the United States, both as to hours of working time and as to wages paid. There is full and complete understanding in the industry between employer and employees as to the application of these provisions. This method of measuring the working time at the places of work has been the standard provision in the basic wage agreements for almost fifty years and is the result of collective bargaining in its complete sense.

There are many reasons why the provision as to working time has been set out as provided by this agreement. The impracticability of measuring time by any other method is inherent in the very nature of mining coal. Coal mines are sometimes very extensive. When they are first opened up, the working places are, of course, closer by and near to the opening of the mine. In such cases there is no problem of either transportation of the men to the working places or time consumed in reaching them; but as mines grow older, the working places move farther and farther away from the portal or opening of the mine, and as such conditions develop, it becomes necessary for provision to be made for transportation of the men over long distances to their working places. This is usually provided by what is known in the industry as "man trips". These trips are scheduled to leave the outside or opening of the mine at a certain hour, so that all the employees will reach their working places by the hour at which work regularly begins at the working places throughout the mine, and these trips are also scheduled to leave the inside of the mine when the day's work is done, at the conclusion of the seven-hour period of work at the working places.

Among other provisions of the agreement, there is provided a time for starting the day's work and a lunch period, as well as a time for expiration of the work day. There is some variation in this, depending upon local conditions as to the starting and quitting time at the various collieries. The agreement provides for cetrain tolerance. In any event, the starting and quitting time are no more than seven hours apart, exclusive of the lunch period.

In the many conferences that have been held over this period of fifty years, naturally all manner of suggestions and proposals for amplification or amendment of the agreement has been made both by the mine workers and the operators.

The uniform high rates of pay that have always been included in the wage agreement of the mining industry contemplate the employee's working day beginning when he arrives at his usual working place. Hence, travel time was never considered as a part of the agreement or obligation of the employer to pay for in this industry, nor as hours worked by the employees, and this has been the case since the eight-hour day was established in the industry—April 1, 1898.

It is urged that any ruling requiring such a change in the custom, tradition and contract provision so as to change the work day from "seven hours' work in the mines at the usual working places" to any new standard for the measurement of time worked, and to the adjustment of wage rates made necessary thereby, would create so much confusion in the bituminous industry as to result in complete chaos, and would probably result in a complete stoppage of work at practically all of the coal mines in the United States. Such a ruling, moreover, would establish such diversity of time actually spent at productive work as between different bituminous coal mines and within each mine that there would be no basis on which any general wage scales could be predicated, collective bargaining would therefore be rendered impossible throughout this industry, and the very purpose of the Fair Labor Standards Act would be defeated. In such an event, it would make necessary the reassembling of the Appalachian Joint Wage Conference and it would be faced with an issue that would be almost impossible of solution by agreement, resulting in an industrial conflict that could paralyze the nation. This would be a most unhappy result to flow from an act that was passed by the Congress to aid workers in industries that had unreasonably long hours and unreasonably low rates of pay, as contrasted with the short hours and the high rates of pay in the bituminous coal mines. The great amount

of money involved in the case of extra payment by the operators or the great changes that would be required in the rates of pay to the miners, should any change in the present contract be necessary by reason of a new standard for the measurement of time worked, is so serious that a negotiated adjustment would seem to be impossible.

For the foregoing reasons, we believe that your Division should accept the standards of wages and hours of work, and the definition of working time, as set forth in the Appalachian Agreement (which embodies the customs and traditions of the bituminous mining industry), as complying both with the provisions of the Fair Labor Standards Act and of Interpretative Bulletin No. 13, to the effect that "reasonable standards agreed upon between the employer and the employee will be accepted for the purposes of the Act".

We therefore respectfully request that your Division issue a supplement to Interpretative Bulletin No. 13, stating that the standards of wages and hours of work, and definition of working time, set forth in the Appalachian Agreement, entered into on May 12, 1939, between twenty-three district associations of bituminous coal operators comprising the Appalachian coal producing area and the International Union, United Mine Workers of America, and the several district agreements based thereon, conform to and satisfy the requirements of the Wage and Hour Act.

Respectfully submitted,

For the United Mine Workers of America:
(S.) EARL E. HOUCK,
Director of the Legal Department.

For the Operators:

(S.) W. L. ROBISON,
Chairman,
(S.) CHARLES O'NEILL,
(S.) L. T. PUTMAN,
(S.) L. C. GUNTER,
(S.) J. D. A. MORROW,
Appalachian Joint Conference
Negotiating Committee.

4626 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 4 (B).

Plaintiffs' Exhibit 4 (B) for Identification is a mimeographed manuscript, consisting of 3 mimeographed sheets, the first of such sheets bearing the title, "United States Department of Labor, Wage and Hour Division, Washington—Two Mining Determinations Announced," and the notation, "For Release Morning Papers, Saturday, July 27, 1940."

The pertinent portion of the same is as follows:

"The second administrative determination announced by Colonel Fleming today involved the question of determining the number of hours worked by miners in the bituminous coal mining industry.

"Colonel Fleming announced that on the basis of an inquiry submitted by the bituminous coal mining industry, the Wage and Hour Division in carrying out its enforcement duties in that industry will accord great weight to any reasonable standards for determining working time which represent the prevailing customs and practices in the particular industry and are supported by a long his-

tory of *bona fide* collective bargaining agreements. In view of the circumstances described by the industry in submitting its inquiry, Colonel Fleming announced that practice of computing working time on a 'face to face' basis in the bituminous coal mining industry would not be unreasonable. Colonel Fleming explained the term 'face to face' to mean the productive work performed after the miner arrives at his usual working place, excluding the time spent in traveling from the portal or entrance of the mine to the place of work and the time spent in returning from the working place to the portal in the evening. The Administrator added that the determination in the bituminous coal mining industry should not be considered to apply to any mining operations where the traditional practice of computing hours worked differs from the custom in the bituminous coal mining industry."

4627 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 4-C.

Plaintiffs' Exhibit 4-C for Identification is a mimeographed manuscript, consisting of 21 mimeographed sheets, with a cover page, the cover page reading, "U. S. Department of Labor, Wage and Hour Division, Washington—Address Scheduled for Delivery by Colonel Philip B. Fleming, Administrator Wage and Hour Division, U. S. Department of Labor, Before The American Mining Congress, Colorado Springs, Colorado, Wednesday, September 18, 1940," and bearing the notation, "For Release Wednesday, September 18, 1940."

The pertinent portions of the same are as follows:

"I should hesitate to attempt to furnish an offhand solution to every problem that has been presented to us,

but I want to list some of the principal ones as a basis, at least, for further discussion.

"1. Must the time spent by the underground worker in traveling from the portal to the face be counted as time worked?

"2. Must time spent at lunch underground be considered as time worked?"

** ** ** ** **

"We cannot predict in advance just what the Courts are going to say in respect to every problem that arises. The best we can do is to tell you what, in our opinion, the law means, and what, as to any particular problem, the Courts have held in the past in analogous, or somewhat similar circumstances. The case of the Cornucopia Gold Mine Corporation, however, may be worth citing, because it involved many of the questions which have been raised by other mine operators.

"The Cornucopia corporation owns and operates a mining property near Cornucopia, Oregon. There is no railroad nearer than 27 miles, and the largest 'big town' is Baker, Oregon, which has a population of around 8,000 and is 75 miles away. This certainly may be considered an isolated mining property. The company was organized in 1930 and it is operating mines which previously had been worked but abandoned. The company did not commence operations until 1936. It lost money that year and also in 1937, but made a profit of about $122,000 in 1938, and, at the time of our investigation, it was estimated that about the same amount of profit would be made in 1939. Our inspector commented that 'the officers and directors appear to be responsible individuals engaged in a legitimate enterprise.'

"The violations of the law which were reported upon inspection were all related either to overtime or the record-keeping requirements.

"About October 24, 1938, when the Wage and Hour Law became effective, the company placed all of its employees on an hourly basis, although before that they had been on an eight-hour shift arrangement. The employees worked 48 hours one week and 56 the next, alternately. However, the new hourly rate was so arranged as to provide approximately the same income as before, and if the exact amount was not arrived at by these calculations, then an arbitrary adjustment was made in some instances to bring the wage up to a sum equivalent to the income as it would have been if figured at the regular daily wage. The question here was, What was the regular rate of pay and did the company pay one and a half the regular rate for overtime since the law became effective? We reached the conclusion that the regular rate of pay was not changed and that, hence, nothing extra was paid for the overtime as required by law.

"This pay plan was in effect for 91 surface workers until September 19, 1939, but for the 97 underground workers a new system was devised November 15, 1938. This new system provided that the underground miners would continue to work the same shifts as before the Act became effective. There were two shifts a day and the miners went underground either at 7 P. M. and came out at 3:30 P. M., or in at 7 P. M. and out at 3:30 the following morning. This shift arrangement constituted a total of eight and a half hours spent underground, of which 30 minutes was deducted as a lunch period, leaving a net of eight hours worked per shift. For this the men were paid a set shift wage of $3.50, $4, or $4.50 a day. But the new system provided that the employees

show only six hours per shift on their time cards, which they kept themselves and turned in each day. The company then re-established the old shift rates. There could be no overtime because the most that could be worked, even for seven shifts a week, was 42 hours. The company's theory was that this was a proper keeping of time because it was maintained that two hours were consumed in traveling through the tunnel of the mine to the place where the miner actually worked. In other words, time spent in traveling from portal to face and from face to portal was not considered by the company to be time worked. It is interesting to note that while the company recorded that each man spent exactly two hours a day traveling underground, our own investigation showed that no miner spent more than 90 minutes daily in underground travel, and that some spent no more than 20 minutes. But, in any event, the question here was whether the time consumed from portal to portal, or only the time actually spent at the face, was to be considered time worked. Our own contention was that time consumed from portal to portal was hours worked, and that for these men the company had failed to pay extra for overtime and had failed to enter on its records the time actually worked."

** ** ** ** ** **

"The portal-to-portal matter also has been presented to us by the bituminous coal mining industry. In response to inquiry I said that the Wage and Hour Division, in carrying out its enforcement duties in that industry, will accord great weight to any reasonable standards for determining working time which represent the prevailing customs and practices in the industry and are supported by a long history of *bona fide* collective bargaining agreement. In view of the circumstances described by the in-

dustry in submitting its inquiry, I announced that the practice of computing working time on a 'face-to-face' basis in bituminous coal mining would not be unreasonable. The term 'face-to-face' was explained to mean the productive work performed after the miner arrives at his usual working place, excluding the time spent in traveling from the portal or entrance of the mine to the place of work, and the time spent in returning from the working place to the portal at the end of the shift. This determination in the bituminous coal mining industry should not be considered to apply to any mining operations where the traditional practice of computing hours worked differs from the custom in bituminous coal mining. In the Cornucopia case, for example, custom and tradition had long recognized the portal-to-portal basis of reckoning time worked.

"We are not yet disposed to take any particular position as to whether the half hour spent eating lunch underground may be deducted from hours worked. The problem is a very difficult one because the employee is required to eat under very unfavorable conditions and is subject to many of the hazards of his job while eating. On the other hand, we recognize that the employee does have time off in order to have lunch and an argument can be made that such time need not be considered as hours worked. But as I say, the Division is not prepared at the present time to make any definitive determination on this question."

For Release Friday Afternoon, November 1, 1940 R-1133

U. S. Department of Labor,

Wage and Hour Division,

Washington.

Informal Hearings on Metal Mining Coming,

Economic studies were begun today at the Wage and Hour Division for two informal fact-finding hearings on the metal mining industry which will be held in the near future. The studies were ordered by Colonel Philip B. Fleming, Administrator of the Division, after conferring with executives of the International Union of Mine, Mill and Smelter Workers (C. I. O.).

One of the hearings will be in Birmingham, Alabama; the other will be in a western city convenient to the metal mining industry of the mountain states. Details of the hearings will be announced soon, Colonel Fleming said.

Facts found at the hearing will be used in arriving at administrative determinations on whether the work day begins and ends when the worker enters and leaves the mine or when he arrives at and leaves his work place in the mine.

Colonel Fleming in July announced that in carrying out its enforcement duties in the bituminous coal industry, the Division will accord great weight to any reasonable standards for determining work time which represent the prevailing custom and practices and are supported by a long

history of bona fide collective bargaining agreements. In line with this policy, Colonel Fleming announced at that time that the computing of working time on a "face to face" basis in a bituminous coal mining industry would not be held unreasonable. "Face to face" means at the exposed vein of coal where the work is done.

A consent decree entered in the United States District Court for the Western District of Washington, Northern Division, on May 3, enjoining the Cornucopia Gold Mines contained a stipulation that time spent by employees in traveling from the "portal" or entrance of the mine to the "face" or place where they work and back is to be deemed time worked.

Officers of the Union who conferred with Colonel Fleming ask that he apply the stipulation regarding hours worked in the Cornucopia case to all subsurface metal mining. Colonel Fleming's conferees included Reid Robinson, President of the International Union, and Benjamin Riskin, Research Director, both of Denver, Colo.; Van D. Jones, member of the Union's International Board, and W. B. Lemley, W. C. Gunnin, John Hill, J. L. Robinson, James Lipscomb, Louis Tarrant, Asbury Hower, Jessie Gaines, all of Bessemer, Alabama; and E. A. Sisemore of Powderly, Alabama. The last named all are officers or representatives of locals operating in the mines of Tennessee Coal, Iron and Railroad Company, the Sloss Sheffield Company, Woodward Iron Company, and Republic Steel Company.

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long history of bona fide collective bargaining agreements. In line with this policy, Colonel Fleming announced at that time that the computing of working time on a "face to face" basis in a bituminous coal mining industry would not be held unreasonable. "Face to face" means at the exposed vein of coal where the work is done.

A consent decree entered in the United States District Court for the Western District of Washington, Northern Division, on May 3, enjoining the Cornucopia Gold Mines contained a stipulation that time spent by employees in traveling from the "portal" or entrance of the mine to the "face" or place where they work and back is to be deemed time worked.

Officers of the Union who conferred with Colonel Fleming ask that he apply the stipulation regarding working hours worked in the Cornucopia case to all subsurface metal mining. Colonel Fleming's conferees included Reid Robinson, President of the International Union, and Benjamin Riskin, Research Director, both of Denver, Colo.; Van D. Jones, member of the Union's International Board; and W. B. Lemley, W. C. Gunnin, John Hill, J. L. Robinson, James Lipscomb, Louis Tarrant, Asbury Hower, Jessie Gaines, all of Bessemer, Alabama; and E. A. Sisemore of Powderly, Alabama. The last named all are officers or representatives of locals operating in the mines of Tennessee Coal, Iron and Railroad Company, the Sloss Sheffield Company, Woodward-Iron Company, and Republic Steel Company.

4632 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 6.

Engineering and Mining Journal.

H. C. Parmlee, Editor.

New York: A. H. Hubbell, H. C. Chellson, Associate Editors; H. H. Wanders, Market Editor; J. H. Edwards, Electric Editor; W. N. P. Reed, Assistant Editor; Washington, D. C., Paul Wooton, San Francisco: J. B. Huttl, Assistant Editor; G. J Young, Consultant; Walter M. Drake, Managing Editor.

Volume 142 April, 1941 Number 4

Collar-to-Collar vs. Face-to-Face.

Because his final interpretation of "hours worked" in metal mines was diametrically opposite to what was expected we invited Colonel Fleming to reconcile his various statements on the subject. His reply appears on page 88. It is a frank admission of the gradual education of a sincere public official, and of the confusion growing out of his early unfamiliarity with an industry. Fundamentally, however, the difficulty is beyond Colonel Fleming's responsibility. It lies in the passion of the New Deal to regulate the habits and customs of all industry in an attempt to remedy recognized abuses in a small segment. Since NRA days it has been abundantly demonstrated that the United States is too large, its industry is too complex, and its business customs are too diverse to be regimented successfully by zealous reformers, however well intentioned. The wage-hour law is merely one example of such an effort. It has been unsatisfactory to operators and miners alike, as well as a headache to the Administrator.

Collar-to-Collar.

Contrary to the expectation of the mining industry, Wage-Hour Administrator Fleming confirmed on March 31 his tentative finding on hours of work in metal mines. He ruled that the work day should be figured on a collar-to-collar or portal-to-portal basis, and denied the operators' request for reconsideration of his earlier opinion. This arbitrary rule caused surprise and consternation because the Administrator had previously announced a policy of not interfering with long-established custom, or changing practice under existing bargaining contracts. Just what caused the abrupt shift in policy was not announced, but it was clear that a fundamental and new issue was established by the ruling. Certainly it goes contrary to the preponderance of the evidence submitted at field conferences in Salt Lake City and Birmingham. Unless appeal is carried to the Courts, the collar-to-collar ruling will stand, with the effective date postponed from April 1 to May 1. (See page 88.)

Collar-to-Collar vs. Face-to-Face.

Wage-Hour Administration defends interpretation of "hours worked" in underground metal mines.

Col. Philip B. Fleming,

Administrator, Wage and Hour Division,

Department of Labor.

The Editor of *Engineering and Mining Journal* has asked me to reconcile, if I can, the statements I made in my speech before the American Mining Congress on Sept. 18, 1940, with my recent approval of an examiner's report

announcing our opinion that in effect hours worked in underground metal mining include all hours spent portal to portal minus the lunch period. The portal-to-portal opinion is summarized as follows:

"The workday in underground metal mining starts when the miner reports for duty as required at or near the collar of the mine, and ends when he reaches the collar at the end of the shift.

"The workday also includes the aggregate of the time spent on the surface in obtaining and returning lamps, carbide and tools, and in checking in and out.

"The workday does not include any fixed lunch period of one-half hour or more during which the miner is relieved of all duties, even though the lunch period is spent underground."

I cannot fully reconcile the two but I can at least explain how my name is attached to the irreconcilable. One of the first public statements I made on any matter affecting the metal-mining industry was issued in the form of a press release on July 27, 1940, with the title, "Two Mining Determinations Announced." One of these administrative determinations dealt with the subject of lessees, a subject which we are still investigating and on which further announcements may be expected in the future. The other so-called administrative determination was made in answer to an inquiry from the bituminous coal mining industry. Since this is the ancestor of all subsequent confusion it is worth quoting in full. Our press release states: "On the basis of an inquiry submitted by the bituminous coal mining industry, the Wage and Hour Division in carrying out its enforcement duties in that industry will accord great weight to any reason-

able standards for determining working time which represent the prevailing customs and practices in the particular industry and are supported by a long history of *bona fide* collective bargaining agreements. In view of the circumstances described by the industry in submitting its inquiry, I announced that practice of computing working time on a 'face-to-face' basis in the bituminous coal mining industry would not be unreasonable. . . . I added that the determination in the bituminous coal mining industry should not be considered to apply to any mining operations where the traditional practice of computing hours worked differs from the custom in the bituminous coal mining industry." When I made my speech in Colorado Springs six weeks later I quoted that statement and I added to it the following sentence: "In the Cornucopia case, for example, custom and tradition had long recognized the portal-to-portal basis of reckoning time worked." It is the implication of that last statement which has led many mining operators to believe that the Wage and Hour Division would accept the face-to-face practice or some modification of face-to-face or portal-to-portal in any mine where the practice had been carried on for a long time. Because of that assumption many mine operators were surprised at my affirmance of the examiner's report on hours worked in underground metal mining in which I accepted for the Division the position that hours worked in metal mines should be counted as portal-to-portal minus the lunch period.

I am afraid that I must take the blame for making a misleading statement.

The decision we made last July to accept the face-to-face computation of hours worked in bituminous coal mining was reached with considerable difficulty. However, right or wrong, my bituminous coal opinion was based on a unique situation. Here is a large industry

with about half a million employees in which the method of computing hours worked is virtually uniform throughout the industry and has been for many years. Furthermore, it is an industry in which this uniformity in agreement on hours worked has been achieved by national collective bargaining, and arrived at by the employers and the employees year after year in joint meetings which go back for half a century. So far as my knowledge goes the determination of working hours has not been established in this way and with such uniformity in any other industry in the United States.

In underground metal mining the practice with regard to hours worked is entirely different. Only part of the industry operates under collective bargaining agreements, and the agreements are characteristically made on an individual mine basis. Different contracts contain different hours provisions. This diversity in practice under union contract is reflected in a diversity of practice in unorganized mines. In practically every state of the Union except the states of Utah and Arizona, where the collar-to-collar system is required by law, and possibly the states of Alabama and Tennessee, the practice in the immediate past has reflected all the different bases for computing hours worked. In a general way I was familiar with this condition when I made my address at Colorado Springs. I suppose that in citing the Cornucopia case, which involved a consent decree agreed to by a mining company for its mine in the State of Oregon, I merely felt that I was giving a single practical example of the type of thing I had in mind. Actually as many mining operators have since reminded me, I gave the impression that the Wage and Hour Division would accept the *status quo* in each individual mine in the United States as of Oct. 24, 1938, the day the act went into effect, as determinative of hours worked in that particular mine under the Fair Labor Standards Act. Since the

date of the speech, we have learned far more about the metal mining industry than we then knew. We have received reports from our regional offices, made surveys, held public conferences. We know now, and we probably should have realized then, that acceptance by the Division of the individual custom of each individual mine would tend to continue a chaotic condition. It would make permanent a lack of standards instead of establishing the standard contemplated in the law. So, to repeat, if I had realized on Sept. 18, 1940, what I know today, I would not have made the kind of loose statement that appears in the speech.

The general opinion of the Wage and Hour Division on determination of hours for which employees are entitled to compensation (straight time and overtime) under the Fair Labor Standards Act was originally explained in the Division's Interpretative Bulletin No. 13. This was first issued in May, 1939, and while it has been revised at various times the basic principles that our attorneys drafted then are still the basic principles to which we adhere. The bulletin says: "As a general rule, hours worked will include (1) all times during which an employee is required to be on duty or to be on the employer's premises or to be at a prescribed workplace, and (2) all time during which an employee is suffered or permitted to work whether or not he is required to do so. In the large majority of cases the determination of an employee's working hours will be easily calculable under this formula and will include, in the ordinary case, all hours from the beginning of the workday to the end with the exception of periods when the employee is relieved of all duties for the purpose of eating meals".[1]

[1] "No opinion can be expressed at this time as to certain cases—e. g., employees engaged in mining or in working under high pressure—where by custom or agreement time spent eating meals is paid for as hours worked."

I believe that a fair reading of that paragraph would lead most persons to conclude that the portal-to-portal method of computing hours worked in underground metal mining is the correct one. In the examiner's report the position is taken, and I think correctly, that any meal period of half an hour or more even though underground is not hours worked. On that one point, we have finally expressed an opinion where no opinion was expressed before. As for the rest, I believe that the report which I have adopted is an application to the underground metal mining industry of the principles which we made known earlier in the administration of the act. But even that general statement in the bulletin, sound though it is, has been the source of some confusion. The word "workplace" is used in the bulletin to indicate any place to which an employee may be sent away from his employer's regular place of business; in metal mining it is customarily used to indicate the spot within a mine to which the miner is assigned. This was clearly not the sense used in the bulletin, but the bulletin has occasionally been thus misconstrued.

This is the history of the Wage and Hour Division position on the collar-to-collar question. What will the Division do about it? First, when the collar-to-collar opinion was approved on March 17, 1941, we stated that for administrative purposes we would consider its effective date to be April 1. Since that time we have realized that it would be fairer to allow a little more leeway to employers to adjust their practices. We have therefore postponed the effective date from the administrative standpoint to May 1, 1941. Second, we have announced that if any employer complies with the wage and hour provisions we will take no action with regard to non-compliance prior to May 1, 1941. Thus any employer whose compliance begins by May 1, 1941, will know that the

Wage and Hour Division will not concern itself with the previous method of computing hours worked for his underground employees.

4639 PLAINTIFFS' EXHIBIT No. 48.

For Release Afternoon Papers,
Wednesday, June 11, 1941

U. S. Department of Labor,

Wage and Hour Division,

Washington.

Working Time Does Not Necessarily Begin at Plant Gates
Administrator Says.

In accordance with the plant protection policy of the War Department announced on June 4, General Philip B. Fleming, Administrator of the Wage and Hour Division, U. S. Department of Labor, said today that in his opinion time spent traveling from fences, walls, or other anti-sabotage barriers to working places will not be considered to be working time under the Wage and Hour Law.

General Fleming warned that where a state law specifically requires that such traveling is working time, the position of the Wage and Hour Division cannot set aside the state statutory requirement.

Furthermore, where by an agreement reached between the employer and the employees provision is made for treating such time as hours worked, this interpretation will not excuse failure to comply with such agreement.

Guards who arrive at the entrance to such barriers and immediately change uniform and start performing duties would be considered to be working from the time they passed the barrier, General Fleming said.

4640 FOR IDENTIFICATION SLOSS EXHIBIT No. 38.

Sloss Exhibit No. 38 for Identification is a printed booklet consisting of, in the first instance, 35 printed pages and cover, the cover page reading, "Wage Agreement between Alabama Coal Mine Operators and District 20, United Mine Workers of America, April 1, 1937 to April 1, 1939." the first twenty-one pages of which set out form of contract between Alabama Coal Operators and District 20, United Mine Workers of America, which form of contract provides:

"This Agreement shall become effective on September 22, 1935, and shall continue in effect until the 1st day of April, 1937, subject to termination on part of either party on notice in writing, for breach in any substantial respect by the other party or by those whom they may represent," and containing provisions with reference to working conditions, hours of work, rates of pay, etc., including the following:

"IV. Maximum Hours and Working Time:

"(a) A seven-hour day, and five-day week (35 hours per week) shall prevail, exclusive of a thirty (30) minute lunch period, with option to run through without suspension, if agreed to between the Operator and the Mine Committee. The seven-hour day means seven hours' work in or about the minutes at the usual working places for all classes of labor (other than those excepted from this

contract, exclusive of the lunch period, whether they be paid by the day or be paid by the tonnage or piece work basis, except in cases of accidents which temporarily necessitate longer hours for those employees required on account thereof; and also excepting that number of mine workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * * * *

"(g) When railroad cars or barges are promised and are on the way to the mines at starting time in the morning, the men shall wait up to forty-five (45) minutes, with the understanding that this waiting time of forty-five (45) minutes may be exceeded by mutual local agreement, provided, however, that where satisfactory local arrangements exist for waiting for cars, the same shall remain in force. Under such conditions the seven-hour day shall begin at the starting time of the men affected, with a full seven hour shift being worked.

(h) Drivers shall take their mules to and from stables and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named. The method at present existing covering the harnessing and unharnessing of mules shall be continued throughout the life of this Agreement.

(i) Motormen and trip riders shall be at the point inside or outside the mine where they receive the cars at starting time. The time required to take motors to

the pass-way before starting time and departing from the same at quitting time shall not be regarded as part of the day's labor, their time beginning when they reach the change or parting at which they receive the cars, but in no case shall their time be docked while waiting for cars at the point named."

By successive agreements appearing on pages 22 to 35 of said booklet, and by a separate agreement seven of printed pages attached to said booklet, the foregoing agreement was continued in force, with increases in rates of pay, and other modifications (none of which, however, changed the above quoted Section IV):

(a) To April 1, 1941.

4642 FOR IDENTIFICATION SLOSS EXHIBITS Nos. 39, 40, 41 and 42.

Sloss Exhibit 39 is a contract executed between Sloss-Sheffield Steel & Iron Company and United Mine Workers of America, District 20, covering the operations of mines at Lewisburg and Flat Top, by their named officers to the extent that they represent any employees of the Company at the coal mines.

This Agreement, in Section Six, "Maximum Hours and Working Time," contains provisions in all respects identical with the provisions quoted in connection with Sloss Exhibit No. 38, with the exception that the work day is set at eight hours instead of seven hours as in the case of Sloss Exhibit No. 38 for Identification, and that the waiting time for railroad cars or barges is specified to be 30 minutes rather than 45 minutes.

The wage scale incorporated in said Agreement carries "Minimum Wage Scale" rates at a designated amount for each occupation on the basis of "per hour—eight hours pay". For illustration: "Machine runner—per hour $0 5025—8-hour day $4.02," and so on covering a total of 45 inside occupations; there is also attached to the contract "Wage Scale—District J—Alabama—minimum wage scale effective April 1, 1934, under Executive Order issued April 22, 1934," covering the same number of inside occupations and being made up in the same way with the exception that the amounts are set forth in accordance with the Executive Order (Plaintiffs' Exhibit 14 for Identification). For illustration, "Machine Runner—per hour $0.6325—8-hour day $4.42."

The Exhibit recites: "This agreement shall become effective on execution and delivery hereof and shall continue in effect until the first day of April, 1935."

Sloss Exhibit No. 40 for Identification is executed between the parties, covering the period of time September 22, 1935, to April 1, 1937, containing substantially the same provisions in reference to wages and wage scale, with the exception of amounts (which are higher), as does Sloss Exhibit No. 39 for Identification, and with the exception of specifying a seven-hour day, contains, in Section IV, identically the same provisions as are quoted in connection with Sloss Exhibit No. 38 for Identification.

Sloss Exhibit No. 42 for Identification is executed between the same parties, covering the period of time May 3, 1937, to April 1, 1939, and extends the agreement set forth in Sloss Exhibit No. 40 for Identification to April 1, 1939, carrying forward the same provisions referred to above in connection with Sloss Exhibit No. 40,

for Identification, and providing for increases in wages and daily rates.

Sloss Exhibit No. 41 for Identification is executed between the same parties (except the United Mine Workers of America is recognized as the exclusive bargaining agent representing the employees of the Sloss Company), entered into on June 10, 1939, and extending Sloss Exhibit 42 for Identification to April 1, 1941, and carrying forward the same information as set forth above of hours of work, and other provisions not pertinent to the issues here involved.

All the above exhibits were signed by the President of the Sloss-Sheffield Steel & Iron Company and by Wm. Mitch, President, District 20, United Mine Workers of America, John L. Lewis, International President, United Mine Workers of America, Phillip Murray, International Vice-President, Thomas Kennedy, International Secretary-Treasurer, and other International and District representatives of the United Mine Workers of America.

4644 FOR IDENTIFICATION REPUBLIC EXHIBIT No. 19.

Republic Exhibit No. 19 for Identification consists of six contracts executed between Republic Steel Corporation and United Mine Workers of America, District 20, covering the coal mining operations only of the Republic Steel Corporation in Alabama for the following periods of time:

(a) April 1, 1934 to April 1, 1935;

(b) January 11, 1935 to September 22, 1935;

(c) September 22, 1935 to April 1, 1937;

(d) April 1, 1937 to April 1, 1939;

(e) April 1, 1939 to April 1, 1941;

(f) May 10, 1941—Temporary Agreement—Expires March 31, 1943.

All these contracts are substantially the same as the contracts with the Sloss Sheffield Steel & Iron Company, Sloss Exhibits Nos. 39 to 42 for Identification, and all contain the provisions quoted in connection with Sloss Exhibit No. 38 for Identification, except that in the agreement covering the period September 22, 1935 to April 1, 1937, and subsequent contracts the workday was specified as being seven hours.

The provisions of these contracts are similar to those of the Sloss Company with reference to the classification of inside occupations, the minimum wage scale, scale per ton, per hour—eight hour day (7 hours by the Executive Order effective April 22, 1934) and the minimum rate of pay for each classified job.

4645 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 47.

Plaintiffs' Exhibit No. 47 for Identification consists of four contracts executed between Alabama (commercial) Coal Operators and United Mine Workers of America, District 20, covering operations of commercial coal mine operations in Alabama for the following periods of time:

(a) September 22, 1935 to April 1, 1937;

(b) April 1, 1937 to April 1, 1939;

(c) May 18, 1939 to April 1, 1941;

(d) May 4, 1941,—Temporary Agreement,—to April 1, 1943.

All these contracts provide for a seven hour day, and with that exception, contain the same provisions with reference to "Maximum hours and working time" as are quoted in connection with Sloss Exhibit No. 38.

The provisions of these contracts are similar to those of the Sloss Company (Sloss Exhibits 39 to 42 for Identification) with reference to the occupation classifications, the minimum wage scale, scale per ton, per hour—seven hour day, and the minimum rate of pay for each classified job.

4646 FOR IDENTIFICATION T. C. I. EXHIBIT No. 47.

T. C. I. Exhibit No. 47 for Identification consists of contracts executed between Tennessee Coal, Iron & Railroad Company and United Mine Workers of America, District 20, covering the operation of the mines of the Tennessee Company, as follows:

(a) Contract dated May 2, 1934, to expire April 1, 1935;

(b) Contract dated January 17, 1936, and effective from September 23, 1935 to April 1, 1937;

(c) Contract dated May 7, 1937, and effective from April 1, 1937 to April 1, 1939;

(d) Contract dated May 19, 1939, extending Contract described in (c) above to April 1, 1941;

(e) Contract dated May 13, 1941, extending contract described in (c) above to such time as a contract shall have been negotiated effective from April 1, 1941 to April 1, 1943;

And the following contracts with the Brotherhood of Mines of Captive Mines:

(f) Contract dated June 7, 1937, and effective to April 1, 1939.

Later the Brotherhood of Miners of Captive Mines became affiliated with the American Federation of Labor under the name of Captive Coal Miners Union, and contracts were executed with that entity as follows:

(g) Contract dated June 28, 1939 and effective to April 1, 1941;

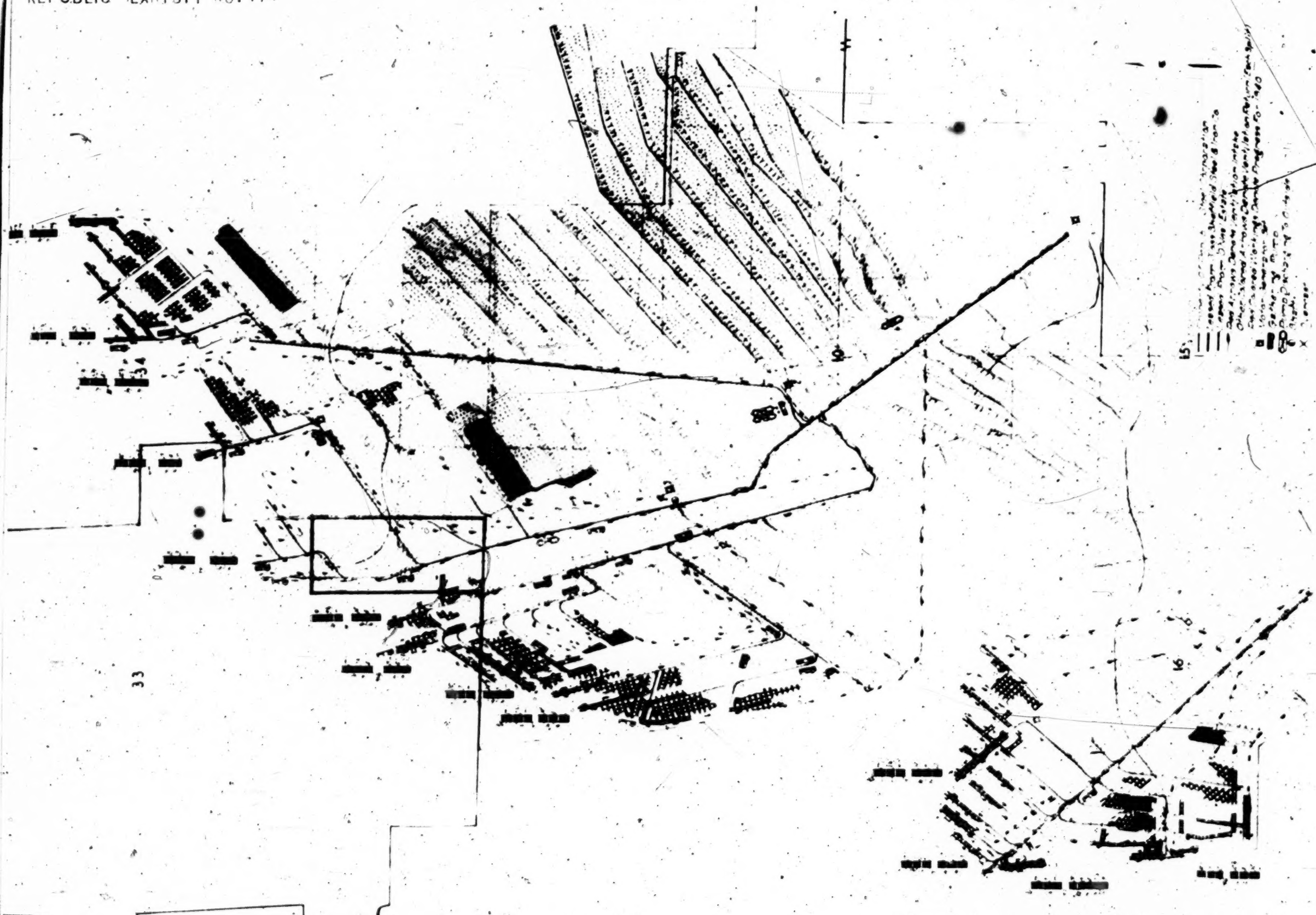
(h) Contracts dated May 13, 1941, extending contract described in (g) above to such time as a contract shall have been negotiated effective from April 1, 1941, to April 1, 1943.

On June 30, 1941, an election was held by the Tennessee National Labor Relations Board at the coal mines of the Tennessee Coal, Iron & Railroad Company, and the United Mine Workers of America was certified as the exclusive bargaining agent for the employees at said coal mines, and the Tennessee Company, by letter dated July 24, 1941, terminated the contract described in (h) above.

All these contracts provide for a seven hour day (except (a) which provided for an eight hour day), and with that exception, contain the same provisions with reference to "Maximum hours and working time" as are quoted in connection with Sloss Exhibit No. 38 for Identification.

The provisions of these contracts are similar to those of the Sloss Company (Sloss Exhibits 39 to 42 for Identification) with reference to the occupation classifications, the minimum wage scale, scale per ton, per hour—seven hour day, and the minimum rate of pay for each classified job.

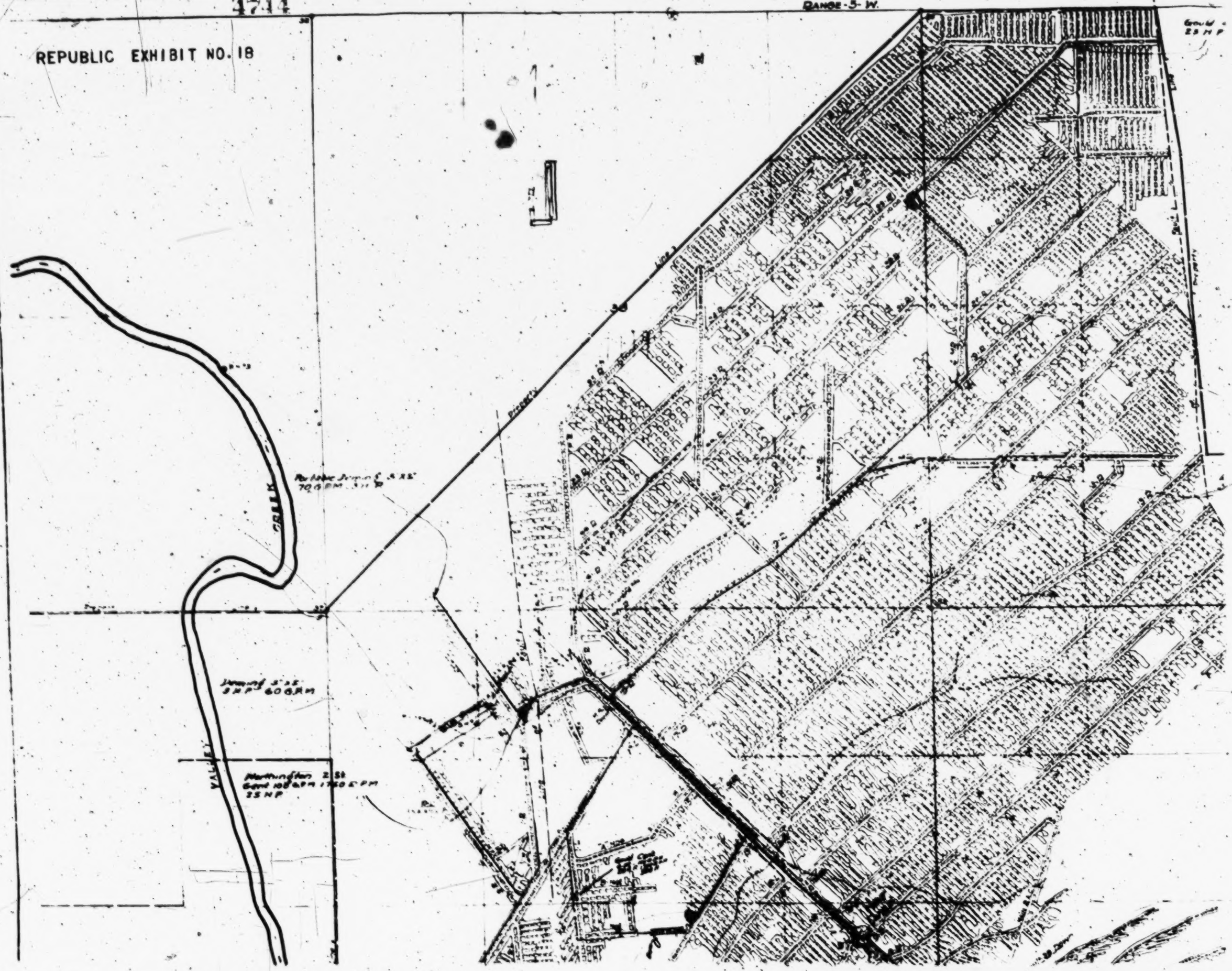
REPUBLIC EXHIBIT NO. 17.



4714

REPUBLIC EXHIBIT NO. 18

RANGE-5-W.

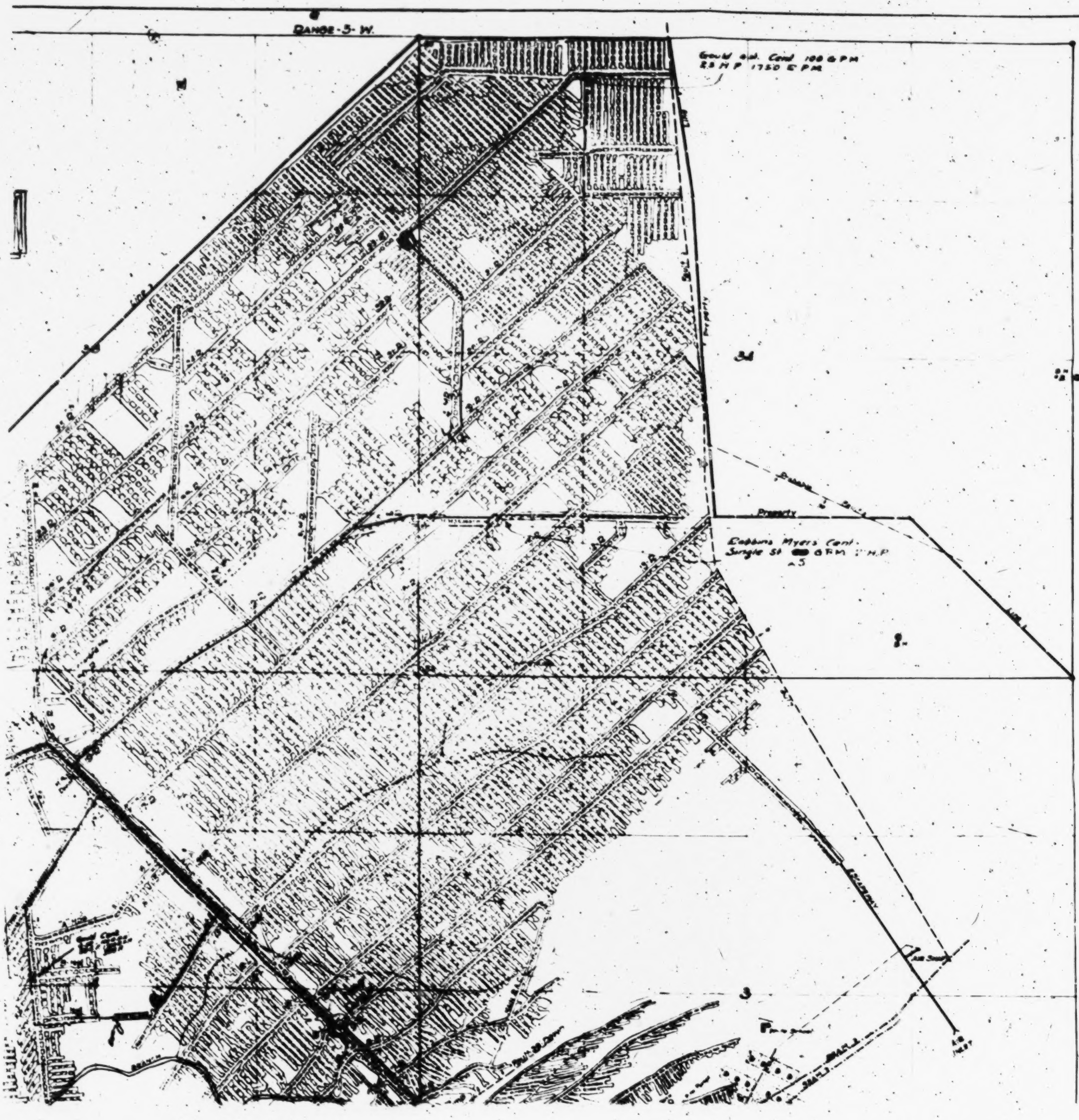


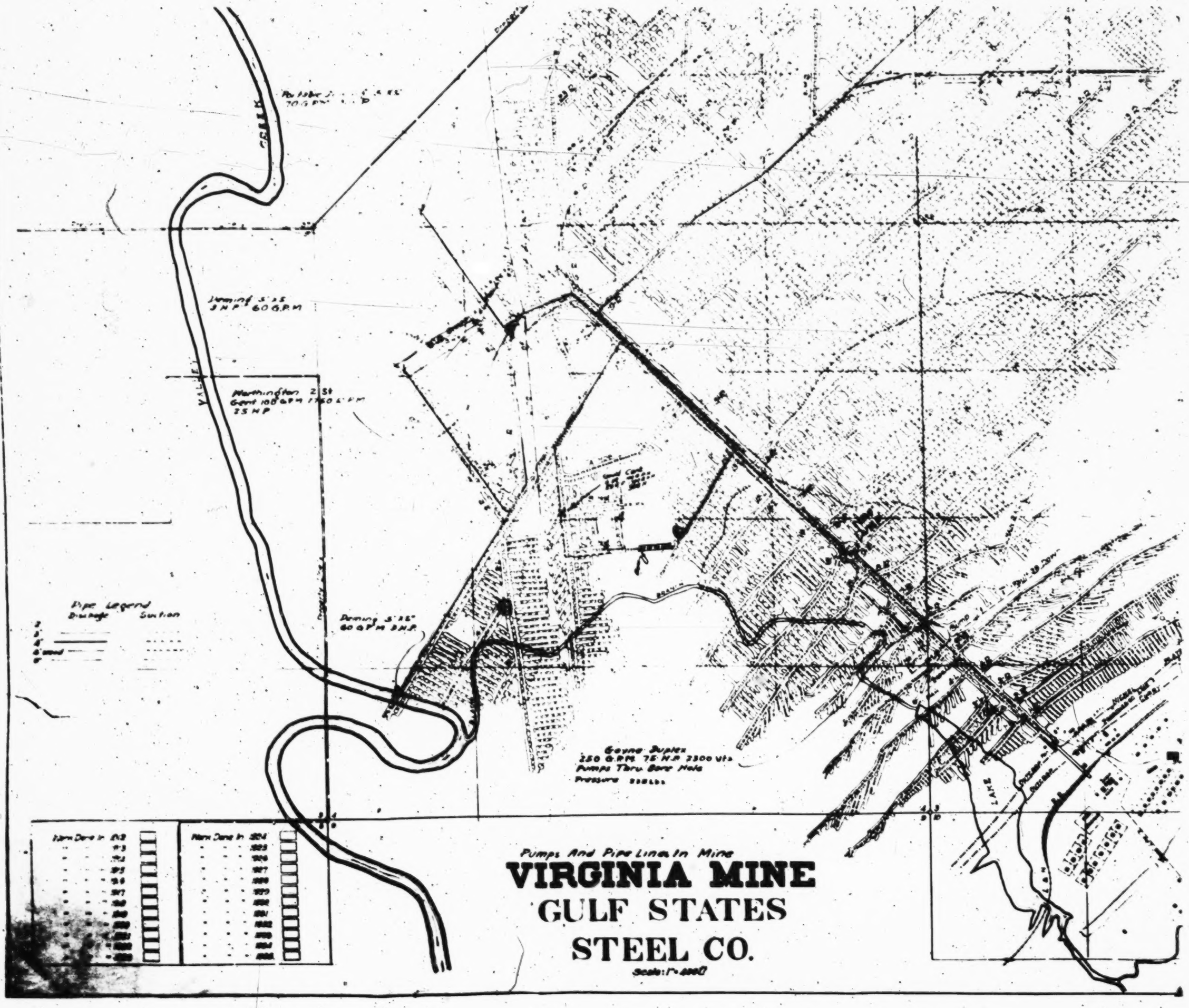
RANGE - 3 - W.

Gould Gen. Cent 100 G P M
2.5 H P 1750 R P M

Property

Robbins Myers Cent.
Single St GPM HP
25




Pipe Legend
Discharge
Suction
Pumps And Pipe Lines In Mine
VIRGINIA MINE
GULF STATES
STEEL CO.

Property

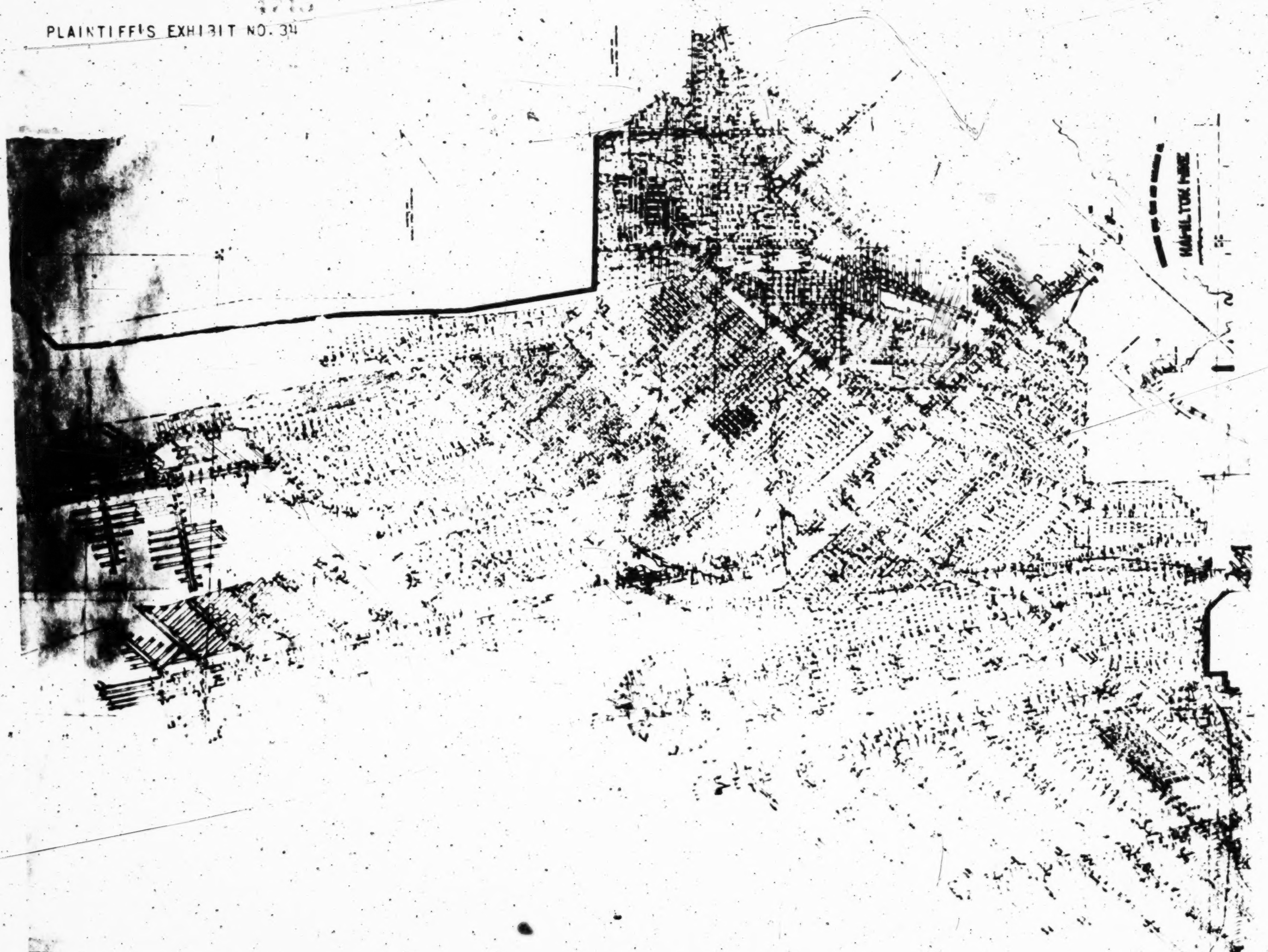
Gaynes Duplex
250 G.P.M. 75 H.P. 2300 Volts
Pumps Thru Bore Hole
Pressure 350 Lbs

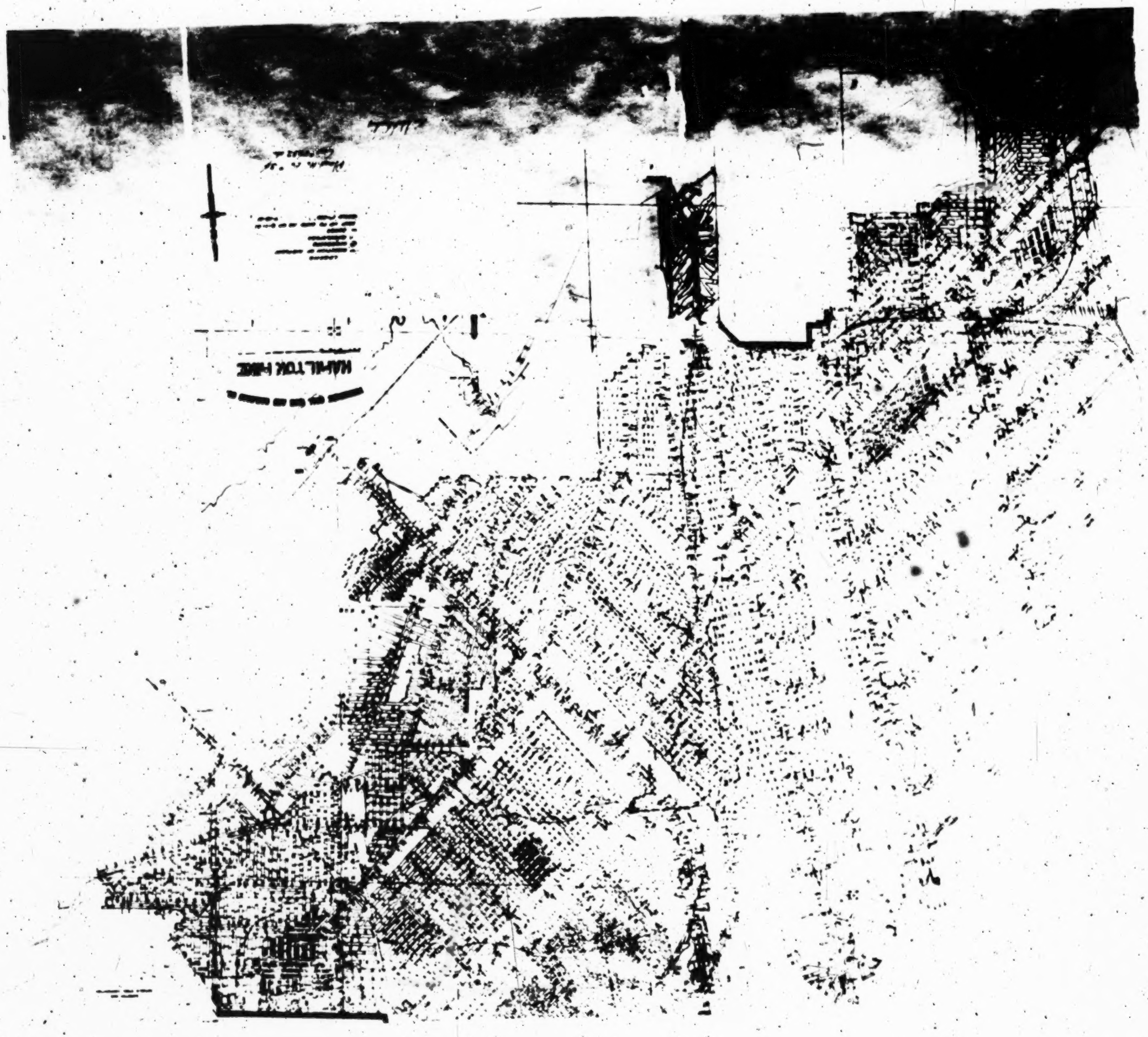
...ps And Pipe Lines In Mine

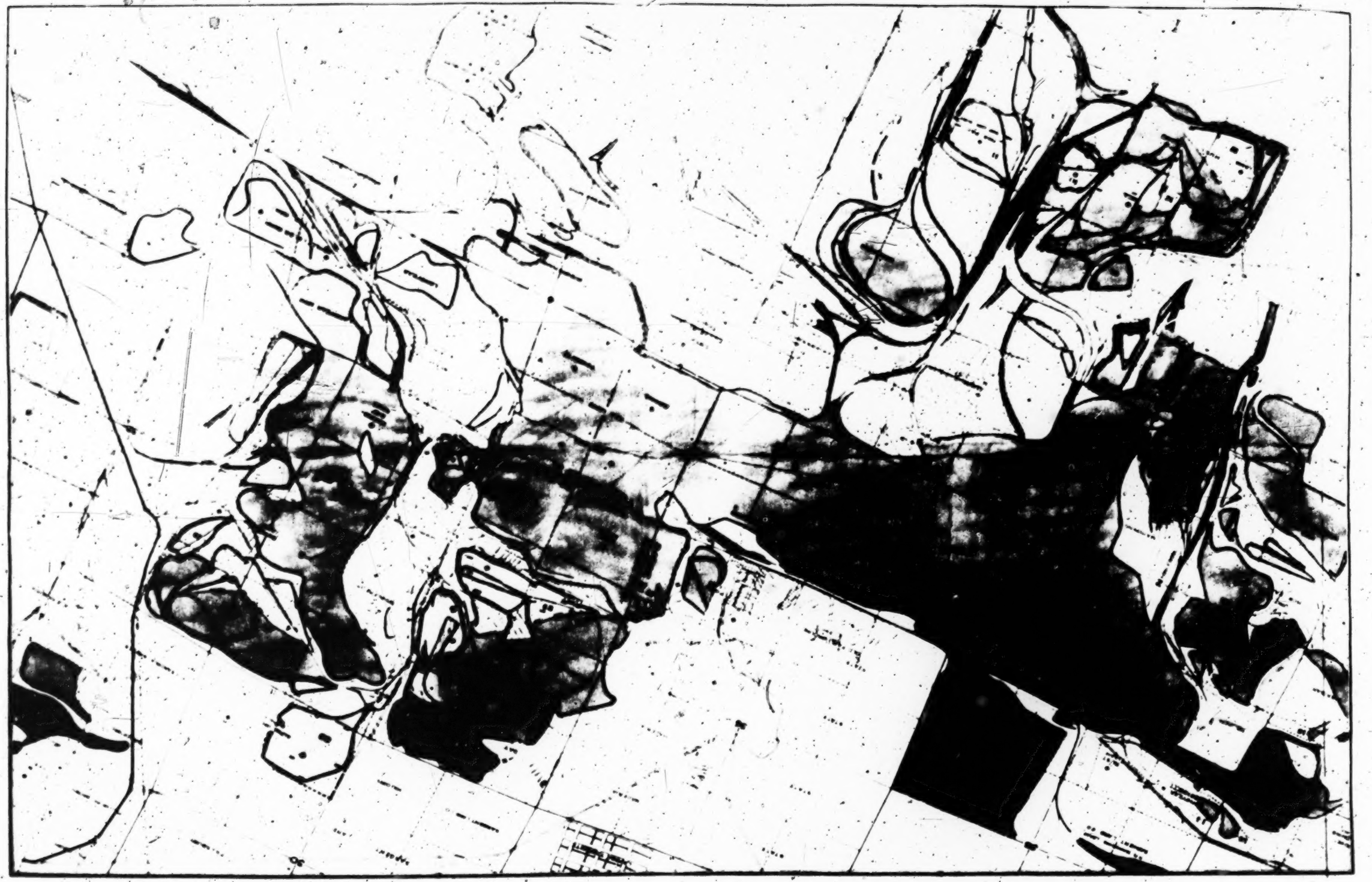
...RGINIA MINE
GULF STATES STEEL CO.

Scale: 1" = 400'

PLAINTIFF'S EXHIBIT NO. 34




MAHALTOK HOSE



PLAINTIFF'S EXHIBIT NO. 40

PLAINTIFF'S EXHIBIT NO. 41

PLAINTIFF'S EXHIBIT NO. 42

4654 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30.

Plaintiffs' Exhibit No. 30 for Identification consists of approximately 200 contracts between The United Mine Workers of America, The American Federation of Labor, and other national unions or branches thereof, representing coal mining employees, and various coal operators and their associations in various parts of the United States:

The first of these contracts was executed March 10, 1898, and is in words and figures as follows:

4655 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-A.

Columbus Day Wage Scale of 1898.

Inside Day Wage Scale for an Eight-Hour Day.

Columbus, Ohio, March 10, 1898.

The following resolution was adopted at a meeting of the Scale Committee of the Interstate Convention, January 28, 1898:

Resolved, That two operators and two miners from each state meet at Columbus, Ohio, on the second Tuesday in March (or March 8), 1898, at the Chittenden Hotel, to formulate a uniform day work scale, based upon the districts upon which the mining prices are based.

In accordance therewith, the representatives of the various competitive districts met at the Chittenden Hotel,

Columbus, Ohio, March 8 and agreed upon the following scale of wages and conditions to govern all inside day labor for the year beginning April 1 next and ending April 1, 1899:

Inside Day Wage Scale.

Tracklayers	$1.90
Tracklayers' helpers	1.75
Trappers	.75
Bottom cagers	1.75
Drivers	1.75
Trip riders	1.75
Water haulers	1.75
Timbermen, where such are employed	1.90
Pipemen, for compressed air plants	1.85
Company men in long-wall mines of third-vein district, Northern Illinois	1.75
All other inside day labor	1.75

The above scale was arrived at by taking the average of the wages paid in all of the competitive districts and reducing said average to an eight-hour day, then adding the advance to said average to correspond with the advance in price of mining to be paid April 1, next.

Resolution I.

The above schedule of day wages applies only to men employed in the performance of their labor, and does not apply to boys, unless they can do, and are employed to do a man's work.

Resolution II.

Whereas, We have failed to agree upon a uniform rate of wages for the different classes of outside labor for the

entire competitive field, owing to the variations of conditions over which we have no control;

Resolved, That the employing of outside day laborers around the mine, and wages to be paid the same, shall be left entirely to the employers, and such employes in all the competitive district, and the question of uniform wages for outside labor be referred to our next Interstate Joint Convention.

Resolved, That where any members of the present force of outside labor in the competitive field prefer to work in the mine in preference to accepting the wages offered for their services as outside day laborers, they shall be given places in the mine to mine coal.

Resolution III.

Resolved, That an eight-hour day means eight hours' work in the mine at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night.

Regarding drivers, they shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named.

Resolution IV.

Resolved, That when the men go into the mine in the morning they shall be entitled to two hours' pay whether or not the mine works the full two hours. But after

the first two hours, the men shall be paid for every hour thereafter by the hour, for each hour's work or fractional part thereof. If for any reason the regular routine work cannot be furnished the inside labor for a portion of the first two hours, the operators may furnish other than regular labor for the unexpired time.

The above was agreed to after the most careful discussion of each item, and we believe it to be the best and most equitable solution of the questions involved, taking into consideration the various interests to be harmonized in order to reach a uniform scale.

It is expected that all the prices and conditions shall be strictly adhered to by both operators and miners.

S. M. DALZELL,
Chairman Committee.
T. L. LEWIS,
Secretary.

Committee on behalf of miners:

JOHN M. HUNTER,
W. D RYAN,
Illinois,
J. H. KENNEDY,
W. G. KNIGHT,
Indiana,
BARNEY NAVIN,
Indiana Block,
W. E. FARMS,
T. L. LEWIS,
Ohio,
P. DOLAN,
WM. WARNER,
Pennsylvania.

On behalf of the U. M. W. of A.:
M. D. RATCHFORD,
President,
W. C. PEARCE,
Secretary.

Committee on behalf of Operators:
S. M. DALZELL,
A. J. MOORSHEAD,
Illinois,
J. M. McCLELLAND,
P. H. PENNA,
Indiana,
W. W. RISHER,
Indiana Block,
J. S. MORTON,
W. J. MULLINS,
Ohio,
G. W. SCHLUDERBERG,
JNO. A. O'NEAL,
Pennsylvania.

Following the execution of the above contract and thereafter down to and including the last contract which was executed on the 19 day of July, 1941, all the other contracts in this exhibit were executed.

As typical of such contracts the pertinent and relevant portions of the following are set forth in extenso:

4659 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-H.

Toledo Interstate Agreement of 1908.

Toledo, Ohio, April 17, 1908.

It is hereby agreed betweem the operators' and miners' representatives of Western Pennsylvania, Ohio and Indiana:

* * * *

Sixth: That an eight-hour day means eight hours' work in the mine at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from same at night.

Regarding drivers, they shall take their mules to and from the stables and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named;

* * *

Signed at Toledo, Ohio, April 17th, 1908.

On behalf of Miners:

FRANCIS FREEHAN,
S. A. WHETZEL,
Pennsylvania,

WM. GREEN,
G. W. SAVAGE,
Ohio,
W. D. VAN HORN,
D. N. CURRY,
Indiana Bituminous District,
PATRICK GOLDEN,
JOHN FOGG,
T. L. LEWIS,
President U. M. W. of A.,
Indiana Block Coal District,
J. B. ZERBE,
Chairman,
W. D. RYAN,
F. S. BROOKS,
Secretaries.

On behalf of Operators:

G. W. SCHLUDERBERG,
JOHN H. JONES,
Pennsylvania,
H. L. CHAPMAN,
F. M. OSBORNE,
Ohio,
INDIANA BITUMINOUS COAL
OPERATORS'
ASSOCIATION,
By P. H. PENNA,
J. K. SIEFERT,
Indiana Bituminous District,
J. H. McCLELLAND,
W. J. SNYDER,
Indiana Block Coal District.

4660 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-V.

Official Mining Scale.

Interstate Agreement.

New York, N. Y., March 9, 1916.

The following agreement made and entered into this 9th day of March, 1916, covering prices and conditions of mining in Western Pennsylvania, Ohio, Indiana and Illinois for the two years beginning April 1, 1916, and ending March 31, 1918, to-wit:

* * *

Fifth—An eight-hour day means eight hours' work in the mine at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night.

* * *

For United Mine Workers Western Pennsylvania—Van Buttner, F. P. Hanaway.

Ohio—John Moore, G. W. Savage.

Indiana—Bituminous: John P. White, Frank J. Hayes, William Green. Block: Lawrence Bramlett, Ed Haverkamp.

Illinois—Frank Farrington, Frank Hefferty.

United Mine Workers of America—John P. White, President; Frank J. Hayes, Vice President, William Green, Secretary.

For Operators—Western Pennsylvania: J. A. Donaldson, George W. Schelederberg.

Ohio—S. H. Robbins, C. E. Maurer.

Indiana—Bituminous Coal Operators' Association—P. H. Penna, M. L. Gould. Block: Wm. M. Zeller.

Illinois—Illinois Coal Operators' Association: C. M. Moderwell, H. C. Perry.

J. C. Goldsem, Chairman; William Green, Secretary of Joint Conference.

4661 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-RR.

Scale Agreement Central Competitive Field.

October 6, 1917.

Washington, D. C., October 6, 1917.

The following agreement, supplemental to the existing Interstate and District Agreements, is entered into with the hope and belief that the advance in wages will result in an increased production of coal and the abolition of local strikes.

It is agreed—

First. That the mining prices for mining mine run coal, pick and machine, in the present contract be advanced 10 cents per ton.

In the block coal field of Indiana the screen coal price to be advanced 12½ cents.

Second. That all day labor and monthly men except trappers and other boys be advanced $1.40 per day. Trappers to be advanced 75 cents per day. Boys now being paid more than $1.90 per day and less than men's wages shall be advanced $1.00 per day.

Third. That all yardage, dead work and room turning be advanced 15 per cent.

Fourth. Subject to approval by the next biennial convention of the United Mine Workers of America, the Mine Workers' representatives agree that the present contract be extended during the continuation of the war, and not to exceed two years from April 1, 1918.

Whereas, Stoppage of work in violation of the agreement has become so serious as to menace the success and perpetuity of the U. M. W. of A. and our joint relations, this conference instructs the respective district executive boards to meet the operators of their various districts for the purpose of agreeing on a penalty clause where none now exists, and if necessary meet to amend and strengthen existing clauses so as to make the penalty more effective in preventing strikes and violations of agreements.

All fines provided for in all agreements shall be automatically collected, and any operator failing to collect and forward to proper parties such fines shall pay a penalty of $2.00 for each employee subject to be fined, the same to be collected and retained in the miners' district organization. And in no case shall any fine be refunded except by mutual agreement of the accredited representatives of the miners and operators.

It is further agreed that where an employee enters suit in the Civil Courts to recover any fine collected in accordance herewith the district organization shall reimburse the operators for expense incurred on account of such suit.

This agreement is subject to and will become effective only on the condition that the selling price of coal shall be advanced by the United States Government sufficient to cover the increased cost in the different districts affected and will take effect on the first day of the pay period following the order advancing such increased prices.

4663 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-13.

New York Interstate Agreement.

New York, N. Y., March 31, 1920.

Pursuant to the instruction of the President of the United States, as communicated to Thos. T. Brewster, Chairman of the Coal Operators' Scale Committee of the Central Competitive Field, and John L. Lewis, President of the United Mine Workers of America, in a letter dated March 19th, 1920, and which in part reads as follows:

"The White House,

Washington, 19 March, 1920.

"Gentlemen:

"I am transmitting to you herewith a copy of the report and award of the Bituminous Coal Commission appointed to adjust matters in controversy between the Bituminous coal miners and operators of the country.

"In accordance with instructions in my letter of appointment to the Commission and memoranda attached thereto and the agreements by mine workers and operators to abide by the report and award of the Commis-

sion, this report and award is the basis upon which the wage schedule agreements between the mine workers and operators shall be made.

"Operators and miners should therefore make arrangements for convening the necessary Joint Conference as soon as possible to make such changes in the terms, provisions and conditions, mining rates and wage schedules as are set forth in this report and award" * * *

We hereby agree:

* * *

Sixth—That the eight-hour day in effect on October 31, 1919, shall continue. An eight-hour day means eight hours' work in the mines at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night.

Drivers shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named.

* * *

For the Operators:

J. A. DONALDSON,
W. M. HENDERSON,
C. E. MAURER,
GEORGE M. JONES,
P. H. PENNA,
M. L. GOULD,
H. L. PERRY,
E. C. SEARLS.
THOMAS T. BREWSTER,
Chairman of the Joint Conference.

For the United Mine Workers:
ROBERT R. GIBBONS,
WILLIAM HARGEST,
JOHN MOORE,
G. W. SAVAGE,
ED. STEWART,
WM. MITCH,
F. FARRINGTON,
HARRY FISHWICK,
JOHN L. LEWIS,
PHILIP MURRAY.
WILLIAM GREEN,
Secretary of the Joint Conference.

4665 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-24.

Contract for Shaft Mines and Strip Mines, District No. 14, Between U. M. W. of A. and S. I. C. O. A.

Adopted at Kansas City, Mo., for Period Beginning April 1, 1920, and Ending March 31, 1922.

* * *

Eight-Hour Day.

Section 2.

1. For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employee's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means

eight hours' work at the usual working places; exclusive of noon time, which shall be one-half hour for all classes of labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night. The operator may refuse to allow any day man to work on any day on which he fails to be at his working place at the starting time.

* * *

Section 24.

1. This contract shall continue in full force and effect beginning April 1, 1920, and expire March 31, 1922.

* * *

In behalf of the Southwestern Interstate Coal Operators' Association.

F. W. LUKINS,
President,
W. P. HAWKINS,
Vice President-at-Large,
C. N. FISH,
Secretary,
Per G. M.

In behalf of the United Mine Workers of America:

ALEXANDER HOWAT,
President District 14,
By AUG. DORCHY,
JOHN WILKINSON,
President District 21,
Per J. D. WINTERS,
D. A. FRAMPTON,
President District 25,
JOHN L. LEWIS,
International President U. M. W. of A.

4666 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-NN.

Agreement.

Cheyenne, Wyo., October 31, 1917.

It is hereby agreed between the Southern Wyoming Coal Operators and the representatives of the United Mine Workers of America of District 22, that the following scale of prices, and Rules and Regulations, and Provisions, shall be in effect November 1, 1917, during the continuation of the war, expiring not later than September 1, 1920.

Hours of Labor.

Section 1. It is definitely understood and agreed that this agreement be based on an eight-hour day. That eight hours shall constitute a day's work in and around the mines and it is definitely understood that an eight-hour day means eight hours' work, at the usual working place, exclusive of one-half hour for mid-shift lunch, six days a week when required by the operators. Sundays, Christmas Day, New Year's Day, Thanksgiving, April first, Decoration Day, Thanksgiving, April first, Decoration Day, Fourth of July and Labor Day excepted. It is understood that the above rules regarding holidays and Sundays shall not apply to monthly men or the making of necessary repairs.

Sec. 2. Drivers shall work full eight hours in their respective places and take their mules to and from the stables, and the time for so doing shall not be included as part of the day's labor, provided that not more than

ten minutes' time is required in going to or returning from his working place and stable.

* * *

SOUTHERN WYOMING COAL OPERATORS,
THE KEMMERER COAL CO.,
By P. J. QUEALY,
Gen. Mgr.,
J. A. QUEALY CO.,
By P. J. QUEALY,
Gen Mgr.,
DIAMOND COAL & COAL CO.,
By THOS. SNEDDON,
Supt.,
LION COAL CO.,
By P. H. BURNELL,
WYOMING COAL CO.,
By P. H. BURNELL,
CENTRAL COAL & COKE CO.,
By ARTHUR VAIL,
Supt.;
THE UNION PACIFIC COAL CO.,
By FRANK A. MANLEY,
Vice-Pres. and Gen. Mgr.,
GUNN-QUEALY COAL CO.,
By P. J. QUEALY,
Pres.,
BEAR RIVER COAL CO.,
By W. D. BRENNAN,
WYOPA COAL CO.,
By W. D. BRENNAN,
UNITED MINE WORKERS OF AMERICA, DISTRICT No. 22,
W. W. GILDROY,
President,

GEORGE YOUNG,
Vice-Pres.,
JAMES MORGAN,
Secy.-Treasurer,
E. E. FORD,
MARTIN MARCHIANO,
JOHN McTEE.

4668 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-43.

Agreement, Made and entered into this 19th day of January, 1923, between Carbon Fuel Co., a corporation, party of the first part, and the undersigned persons, parties of the second part, governing the operations of the coal mines of the said party of the first part for the period beginning January 1, 1923, and ending January 1, 1925.

* * *

Eight Hour Day.

1. An eight hour day means eight hours work in the mine at the usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night.

Regarding drivers, they shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's work, their work beginning when they reach the change at which they receive empty cars, but in no case shall the drivers' time be docked while he is waiting for such cars at the point named. The

prevailing custom for drivers relative to harnessing and unharnessing their mules shall continue.

* * *

4669 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-36.

Agreement.

This Agreement, made during the months of May and June, 1920, between the Various Coal Companies operating coal mines and coke ovens in the State of Colorado, party of the first part, hereinafter known as the Company, and the United Mine Workers of America, with National Headquarters at Indianapolis, Indiana, and District No. 15, United Mine Workers of America, with headquarters at Pueblo, Colorado, and the Local Unions, United Mine Workers of America, existing at the mining camps of the Various Coal Companies and those Employees of the Various Coal Companies who are members of the United Mine Workers of America, parties of the second part, hereinafter referred to as the National Organization, District Organization, Local Organization, Union or the Employees, as the case may be, Witnesseth:

* * *

Hours of Labor.

This contract is based on an eight-hour work day in all mines, as set forth in the Colorado eight-hour law. This means eight hours at the working places. The working

hours of all classes of labor not covered in the Colorado eight-hour law are to continue as they now exist.

* * *

On Behalf of the Operators:

THE VICTOR-AMERICAN FUEL CO.,
By W. H. HUFF,
President,
S. I. HEYN,
Secretary,
CANON RELIANCE COAL CO.,
By J. S. CHENEY,
Vice-Pres.,
MOZART LEWIS,
Supt., Wolf Park,
D. I. DICK,
Supt., Reliance,
THE GIBSON LUMBER & FUEL CO.,
By HERMAN LOEHR,
Vice-Pres.,
STANLEY PAVALSKY,
Supt., Royal Gorge,
THE COLORADO & UTAH COAL CO.,
By G. W. HARRIS,
President,
B. A. HARRIS,
Gen'l. Mgr.,
THE CHAMPION FUEL CO.,
THE EVANS FUEL CO.,
THE INTERNATIONAL FUEL CO.,
By G. ZARLENGO,
President,

R. S. HUSBAND,
Supt., Matchless,
JOHN E. DALEY,
Gen'l. Supt., Evans,
THOMAS ALLEN,
Supt., Wolf Creek,
THE BEAR RIVER COAL CO.,
By W. MAYFIELD,
Secy.-Treas.,
ROBT. W. HENDRICKS,
Supt., Bear River,
AMALGAMATED
DEVELOPMENT CORPORATION,
By BELMONT B. MAGEE,
President,
ALBERT J. MAGEE,
Secy. Treas.,
THE UNITED COLLIERIES
COMPANY,
By ANDREW WALKER,
President,
THE BOULDER BLACK DIAMOND COAL CO.,
By HELEN A. GOLDEN,
Gen. Mgr.,
GEO. WILLIAMS,
Supt., Black Diamond,
THE PALISADES COAL &
SUPPLY CO.,
By H. C. HUBER,
Secretary,
J. H. CUMMINGS,
Director,
DAVID I. LLOYD,
Supt., (Palisades)

THE COLORADO SPRINGS CO.,
By GEO. A. KRAUSE,
President,
THOS. J. FISHER,
Secretary,
McNALLY & THOMPSON,
By S. M. THOMPSON,
THE BLACK CANON COAL & FUEL CO.,
By TALTON F. CRANE,
Secy.-Treas.,
STAR COAL CO.,
By W. H. OWENS,
W. T. BRYAN,
THE JEWEL COAL CO.,
ARCH BEAN,
Pres.,
JOE SMITH,
Supt.

On Behalf of the United Mine Workers of America:

For the International Union:
J. L. LEWIS,
President,
WM. GREEN,
Secy.-Treas.,
PHILIP MURRAY,
Vice-Pres.,
W. D. VAN HORN,
A. R. WATKINS,
JOHN ZIMMERMAN,
Policy Committee,
ROBERT FOSTER,
NICK FONTECCHIO.

On Behalf of District Union:

LUKE BRENNAN,
International Board Member,
JOHN McLENNAN,
President,
MIKE LIVODA,
Vice-Pres.,
FELIX POGLIANO,
Secy. Treas.,
O. F. NIGRO,
Board Member, Sub-Dist. No. 5,
FRANK SCHUSTER,
Board Member, Sub-Dist. No. 3.

Scale Committee from Locals:

CHAS. LEVEQUE,
Delagua, 1878,
ALFONSO TRUJILLO,
Hastings, 1884,
BLAIR PADAVICH,
Gray Creek, 1929;
B. PASTORS,
Ravenwood, 3105,
JAMES GALLEDGE,
Radiant, 2189,
JAMES WALKER,
Chandler, 2546,
WM. BAINTON,
Wadge, 3051,
JAMES DURHAM,
Pinnacle, 1894,
AUGUST DEVIVIER,
Wolf Park, 2850,
FRANK ROSICK,
Wolk Park, 2850,

ALBERT NEWCOMB,
Wolk Park, 2850,
HARRY E. TURNER,
Reliance, 3018,
ED. McCARGISH,
Reliance, 3018,
R. E. CHAPMAN,
Royal Gorge, 2850,
S. E. SETTERFIELD,
Royal Gorge, 2850,
W. O. TAYLOR,
Mt. Harris, 3030,
W. H. BOYD,
Mt. Harris, 3030,
WM. FAIRHURST,
Mt. Harris, 3030,
JOHN F. NATION,
Mt. Harris, 3030,
ANDY ZURICH,
Matchless, 1668,
JAMES JAMES,
Matchless, 1668,
PETER BAMMER,
Matchless, 1668,
C. BROWN,
Wolf Creek, 3125,
JAMES BENNETT,
Wolf Creek, 3135,
THOS. G. ALLEN,
Wolf Creek, 3125,
ALBERT DI PILLA,
Evans, 2753,
JAKE POPINEAU,
Evans, 2753,
JOHN SPONSKE,
Evans, 2753,

C. LORENZO,
Bear River, 3045,
JOE RANNER,
Bear River, 3045,
CHAS. WESTMAN,
Bear River, 3045,
JOHN H. HUGHES,
Elk Creek, 4415,
NOAH H. HURST,
Elk Creek, 4415,
THOS. HARVEY,
Elk Creek, 4415,
JAMES NAUGHTON,
Monroe, 4423,
LEW F. EDER,
Monroe, 4423,
EMMETT WADE,
Monroe, 4423,
GEO. PHILLIPS,
Black Diamond, 2483,
J. G. WILLIAMS,
Black Diamond, 2483,
CHAS. HUMPHREY,
Black Diamond, 2483,
N. F. HORAHAN,
Palisades, 1772,
CHAS. RUDEEN,
Palisades, 1772,
BURT BENEDICT,
Palisades, 1772,
FRANK CHANNELL,
Curtis, 1662,
F. E. CAMPBELL,
Curtis, 1662,
THOS. DURFEE,
Curtis, 1662,

THOMAS SHERRATT,
Maitland, 3001,
CHAS. S. BURNS,
Toltec, 423,
JOHN McSTRAVAK,
Toltec, 423,
H. C. STEWART,
Sopris, 3048,
ABRAN TRUJILLO,
Sppris, 3048,
SAM FALSETTO,
L. U. 4575,
HARRY SMITH,
L. U. 4575.

4672 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-45.

Agreement By and Between the Operators of the Kanawha District of West Virginia and the United Mine Workers of America, District No. 17. Effective April 1st, 1923. Expiring March 31st, 1924.

Acting upon the request of the United States Coal Commission in the interest of common welfare as set forth in a message dated January 4, 1923 and addressed by the commission "To the Operators and Miners Committee on Reorganization," then meeting in Chicago, Illinois, reading as follows:

"To the Operators and Miners' Committee on Re-Organization:

"The Congress of the United States, charged with the duty of legislation for the general welfare of the Ameri-

can people, has created the United States Coal Commission to investigate the coal industry and to report the facts which it may find and to make recommendations to assist the legislative branch of our government in its efforts to guarantee justice to all concerned, to stabilize the industry, and to keep the mines in uninterrupted operation.

"This commission has not yet had time to ascertain the facts nor to reach any conclusions as to the merits of your controversies, but it is satisfied that delay in reaching an agreement is bad for the whole country and that every interested party would suffer a greater economic loss by the closing of your mines even for a comparatively short period than would be sustained by a continuance of your present agreement until April 1, 1924.

"If, therefore, all efforts to reach an agreement fail the commission urges you in the interest of the common welfare to continue your present arrangement until April 1, 1924, by which time this commission expects to have found and reported fully the facts over which your disagreements have arisen with recommendations to the Congress and by which time the Congress will have had opportunity to consider and take such action in the premises as it may deem wise.

(Signed) "JOHN HAYS HAMMONDS,
"Chairman, U. S. Coal Commission."

Washington, January 4, 1923.

Memorandum of Agreement.

This joint conference of Miners and Operators of the Kanawha District in West Virginia as now constituted

hereby reaffirms the wage scale contract now existing between District 17, United Mine Workers of America and the Coal Operators of Kanawha District, whose interests are represented in this conference and hereby extends same for period of one year from April 1st, 1923, to March 31st, inclusive, 1924, in all of their terms, provisions and conditions, except as hereafter specifically provided. The exceptions to the present agreement, which will become a basic part of this agreement from April 1, 1923, to March 31, inclusive, 1924, are as follows:

Award of Bituminous Coal Commission.

Following is the award contained in the majority report of the United States Bituminous Coal Commission to the President:

"We hereby award that all the terms, conditions, and provisions, mining rates, and wage schedules in effect on October 31, 1919, is what is known as the Washington agreement, dated October 6, 1917, and the agreements preceding the Washington agreement, to which the Washington agreement is supplemental and upon which it is predicated, applying to the central competitive field and the outlying districts, shall be written into the agreement for which these findings constitute a basis, except as the same may be modified by the awards and recommendations hereinafter set forth.

"As a modification of the terms of the agreements above recited, we award:

* * *

"h. That the decisions which hereinbefore appear in the body of this report and which are hereinafter sum-

marized, are to be incorporated, according to the letter and spirit of the said decisions, in the agreements to be drawn between the miners and operators; and that the said decisions shall constitute the basis upon which the wage agreements in all districts shall be predicated. They are not subject to negotiations, but shall be written into all agreements and schedules of wages. However, the several joint-scale committees may, by mutual agreement, make such proper adjustment of local conditions as may come within the terms and scope of this award, and of the Washington agreement, dated October 6, 1917, and of the agreements preceding the Washington agreement, to which the Washington agreement is supplemental, as more fully set forth in clause 6 of the joint agreement of the central competitive field, dated March 9, 1916. These decisions are summarized as follows:

* * *

"2. That the eight-hour day in effect on October 31, 1919, in what is known as the Washington agreement, dated October 6, 1917, and the agreements preceding the Washington agreement, to which the Washington agreement is supplemental, applying in the central competitive field and outlying districts, shall be written into the agreements for which these findings constitute a basis.

* * *

Section 1. That an eight-hour day means eight hours work in the mine at usual working places for all classes of inside day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night.

Regarding drivers they shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning

when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named. The prevailing custom for drivers relative to harnessing and unharnessing their mules shall continue.

On behalf of the Operators:

E. O. DANA,
A. W. FLUEGEL,
JOHN S. McKEEVER,
FRANK O. HARRIS,
E. L. MICHIE,
W. C. MITCHELL,
A. W. POLLOCK.

On behalf of the United Mine Workers of America:

PERCY TETLOW,
C. F. KEENEY,
FRED MOONEY,
WM. PETRY,
J. O. SMITH,
PAT REID,
E. G. KAY,
W. E. PHALEN.

4675 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-49.

Terre Haute Agreement Between Indiana Coal Operators Association and United Mine Workers of America, District No. 11, Effective from April 1, 1930.

This Agreement adopted by and between District 11, United Mine Workers of America, and the Indiana Coal

Operators Association, effective November 1, 1928 to March 31, 1930 inclusive. Witnesseth:

* * *

Terre Haute Agreement.

This agreement effective April 1, 1930 and expiring March 31, 1931.

Article I.

Sec. 1. This contract is based upon an eight-hour workday. It is definitely understood that this shall mean eight hours' work at the face, exclusive of the noon time, six days in the week, and that no local ruling shall in any way deviate from this agreement, or impose conditions affecting the same, but any class of day labor may be paid at the option of the operator for the number of hours and fraction thereof actually worked at the hour rate, based on one-eighth of the scale rate per day; provided, that when men go into the mine in the morning they shall be entitled to two hours' pay whether the mine works or not, excepting in event of a mine being closed down by action of any member or members of the U. M. W. of A., the two hours' pay shall be forfeited.

* * *

Witnesseth:

INDIANA COAL OPERATORS' ASSOCIATION,
HOMER B. TALLEY,
JOHN A. TEMPLETON,
HUGH SHIRKEY,
H. M. FERGUSON,

W. J. FREEMAN,
CHAS. HALL,
CHAS. GOTTSCHALK,
P. L. DONIE,
HARVEY CARTWRIGHT.

DISTRICT No. 11, UNITED MINE WORKERS OF AMERICA,
MICHAEL FERGUSON,
ABE VALE,
WM. MITCH,
W. H. RANEY,
STELL HOBBS,
FRANK BARNHART,
PETE MOSELE,
NEIL BEAM,
THOS. BRENTLINGER,
THOS. GAMBLE,
MICHAEL CONVEY,
GEORGE DUDLEY,
LON CRAWFORD,
ERNEST TAYLOR,
HENRY SHAFER.

4676 PLAINTIFFS' EXHIBIT No. 30-51.

Wage Agreement and Working Conditions Between the Illinois Coal Operators Association, and the International Union, United Mine Workers of America, and District No. 12, United Mine Workers of America.

This Contract, made and entered into on this 10th day of August, 1932, by and between The Illinois Coal Operators Association, party of the first part, and The Inter-

national Union, United Mine Workers of America, and District No. 12, United Mine Workers of America, parties of the second part,

* * * *

Definition of Eight-Hour Day for Miners.

Eleventh (a) The above scale of mining prices is based upon an eight-hour working day and it is definitely understood that this shall mean eight hours' work at the face, exclusive of noontime, six days a week, or forty-eight hours in the week, provided the operator desires the mine to work and no local ruling shall in any way affect this agreement, or impose conditions affecting the same.

Overtime for Day Labor.

(b) Any class of day labor may be paid, at the option of the operator, for the number of hours and fractions thereof actually worked at an hour rate based on one-eighth of the scale rate per day. Provided, however, that when the men go into the mine in the morning they shall be entitled to two hours' pay whether the mine hoists coal two hours or not, except in the event that they voluntarily leave their work during this time without the consent of the operator, they shall forfeit such two hours' pay. Provided, further, that overtime by day laborers, when necessary to supply railroad chutes with coal by night or Sunday, where no regular men therefor are exclusively employed, or when necessary in order not to impede the operation of the mine the day following, and for work which cannot be performed or completed by the regular shift during the regular hours without impeding the operation of the mine, shall be performed and paid for at the same rate per hour.

* * *

This contract becomes effective August 10, 1932, and will remain in effect to and including March 31, 1933.

For the Illinois Coal Operators Association:
W. J. JENKINS,
President,
FRED S. WILKEY,
Secretary.

For the United Mine Workers of America, District 12:
J. H. WALKER,
President,
FOX HUGHES,
Vice-Pres.,
WALTER NESBIT,
Secretary,
JOHN MOULIN,
Chairman, Scale Committee,
JOHN L. LEWIS,
President, United Mine Workers of America, International Union,
WM. J. SNEED,
Representing the International Union, United Mine Workers of America.

Extension of Contract.

Whereas, At the time the wage contract of August 10th, 1932 was adopted, it was an open question whether the duration thereof should be to and including March 31, 1933, or until a later date;

And Whereas, Since August 10th, 1932, the operators and mine workers of the adjacent State of Indiana signed a wage contract effective to and including March 31, 1935;

4782

Now, Therefore, In view of similarity in working conditions in Illinois and Indiana, it is hereby agreed between the undersigned that the wage contract of August 10th, 1932, be and it is hereby extended in full force and effect to and including March 31, 1935.

Dated this 22nd day of December, A. D. 1932.

For the Illinois Coal Operators Association:

W. J. JENKINS,
President,
FRED S. WILKEY,
Secretary.

For the United Mine Workers of America, District 12:

J. H. WALKER,
President,
FOX HUGHES,
Vice-Pres.,
WALTER NESBIT,
Secretary,
JOHN MOULIN,
Chairman, Scale Committee,
JOHN L. LEWIS,
President, United Mine Workers of America, International Union,
WM. J. SNEED,
Representing the International Union, United Mine Workers of America.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-53.

4678 Des Moines Agreement.

This contract, made and entered into by and between District No. 13, of the U. M. W. of A. and each member

thereof, party of the first part, and the Iowa Coal Operators Association and each member thereof, party of the second part.

Witnesseth: That it is understood and agreed that all of the terms and provisions herein contained are for the exclusive joint use and benefit of District No. 13 of the U. M. W. of A. and each member thereof, and each and every member of the Iowa Coal Operators Association, and this agreement is entered into with the hope and belief that the good relations existing between the members of the two Associations will continue without the interruption of local strikes called in violation of the Agreement which is not countenanced by either Association.

It is agreed that said contract shall take effect April 1st, 1933, and remain in effect until March 31st, 1935, except that either party to this contract may, by giving thirty (30) days notice, convene a joint meeting for the purpose of hearing arguments for readjustment of contract, because of changes in competitive basic districts, or to make changes to comply with Federal legislation requiring reorganization of the coal industry.

Agreement made by the Iowa Coal Operators Association of Iowa and the United Mine Workers of District No. 13, effective April 1st, 1933, until March 31st, 1935, both inclusive.

* * * * *

General Resolutions Applying to District 13.

Resolution No. One.

Definition of Eight Hour Work Day.

(a) The above is based upon an eight hour work day and it is definitely understood and agreed that an eight

hour day means eight hours' work in the mine at the usual working places for each individual employee, six days a week when required by the operator (Sundays and the following holidays excepted: New Year's Day; Washington's Birthday, April First, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day; second Tuesday in December, 1934, and Christmas Day. The above named holidays shall be the only holidays under this agreement except as hereinafter provided regarding pay days.) This shall be exclusive of the time required in reaching said working places in the morning and returning from same at night.

Note: Should any of the above mentioned holidays fall on Sunday the following Monday shall be observed as same, except Washington's Birthday.

* * * * *

Rules Governing Drivers.

(c) Drivers shall take their mules to and from the stables and the time required in so doing shall not include any part of the day's labor, their work beginning at the place where they receive empty cars; but in no case shall a driver's time be docked while he is waiting for cars at the point named. And in no case shall the drivers be required to put in more than ten minutes extra time on the road each way with their mules from the stables to the place where they receive their empty cars, without compensation for the entire time, and the custom of harnessing and unharnessing the mules shall remain the same at each mine as heretofore. Where it is the practice to haul men in the trip, the latter shall leave the bottom at such time as the company may determine to be necessary for employees to reach their working places in time to begin work at the hour fixed. It is further agreed when the day men go down into the mine in the morning they shall

shall have at least two hours' work. This not to apply in case of accidents occurring where the men would have to be called out of the mine through a violation of the state mining law.

Resolution No. Two.

Starting Time.

The eight hour work day shall commence at 7 a. m. from April 1 to October I, and 8 a. m. from October 1 to April 1, except when otherwise agreed locally, with one-half hour for noon where firing but once a day occurs, and one hour for noon where it is necessary to fire twice a day. In neither case shall such nooning be counted a part of the eight hour day.

Signed on behalf of the operators:

SAM BALLANTYNE,
President,
L. P. LOVE,
Secretary.

Signed on behalf of the Miners:

FRANK WILSON,
President,
ALF HJORT,
Secretary.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT
No. 30-55

4681 Appalachian Agreement.

Between Northern Coal Control Association and the Smokeless and Appalachian Coal Association; and the United Mine Workers of America. Signed Sept. 21, 1933.

When the President approved this agreement he added to it the following provision:

"In approving this agreement, it is with the understanding that the hours and wages and conditions of employment recited herein may also be applied to the employees who are not parties hereto; and that the requirements of Sec. 7-a of the N. I. R. A. will be complied with in carrying out this agreement."

FRANKLIN D. ROOSEVELT.

Appalachian Agreement.

This Agreement is made and entered into pursuant to the provisions of Section 7 (b) of the National Industrial Recovery Act, and shall become effective upon approval by the President of the United States as provided therein.

This Agreement, made the 21st day of September, 1933, between the Northern Coal Control Association, a voluntary association on behalf of each member thereof, and the Smokeless and Appalachian Coal Association, a voluntary association on behalf of each member thereof, hereinafter referred to as the Operators, parties of the first part; and the International Union United Mine Workers of America and Districts 2, 3, 4, 5, 6, 17, 19, 30, and 31, hereinafter referred to as Mine Workers, and on behalf of each member thereof, party of the second part. (New Dis-

tricts of the United Mine Workers of America may be established in this territory.)

* * * * *

Maximum Hours and Working Time.

Eight hours of labor shall constitute a day's work. The eight-hour day means eight hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

This Agreement shall become effective after approval by the President and on the same day that the bituminous coal code applicable to the territory embraced herein shall become effective, following its approval by the President; and it shall continue in effect until the first day of April, 1934.

In witness whereof each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

UNITED MINE WORKERS OF AMERICA,
By JOHN L. LEWIS,
President,
PHILIP MURRAY,
Vice President
THOMAS KENNEDY,
Secretary.

NORTHERN COAL CONTROL ASSOCIATION,
By J. D. A. MORROW,
President,
WALTER A. JONES,
Secretary.
SMOKELESS AND APPALACHIAN COAL ASSOCIATION,
By E. C. MAHAN,
President,
H. R. HAWTHORNE,
Secretary.

For the Mine Workers:

VAN A BITTNER,
P. T. FAGAN,
SAM CADDY,
PERCY TETLOW,
JAMES MARK,
FRANK MILEY,
WM. TURNBLAZER,
FRANK HUGHES and
WILLIAM FEENEY.

For the Operators:

J. D. A. MORROW,
R. E. JAMISON,
W. L. ROBISON,
R. L. IRELAND, JR.,
WM. EMERY, JR.,
E. C. MAHAN,
D. C. KENNEDY,
H. C. FAUST,
W. A. RICHARDS,
D. A. REED,

CHARLES O'NEILL,
HEATH S. CLARK,
W. A. BISHOP,
J. D. FRANCIS,
S. C. HIGGINS,
R. E. TAGGART and
S. D. BRADY, JR.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-58.

Appalachian and Kanawha District Agreements by and between the Kanawha Coal Operators' Association and the United Mine Workers of America, District 17, and the International Union effective April 1, 1934 to March 31, 1935, Inclusive.

4683 Appalachian Agreement.

This Agreement is made and entered into pursuant to the provisions of Section 7 (b) of the National Industrial Recovery Act.

This Agreement made the 29th day of March, 1934, between the Eastern Bituminous Coal Association, Georges Creek and Upper Potomac Coal Association, Somerset County Coal Operators' Association, Western Pennsylvania Coal Control Association, Ohio Coal Control Association, Operators' Association of the Williamson Field, Big Sandy-Elkhorn Coal Operators' Association, Hazard Coal Operators' Exchange, Kanawha Coal Operators' Association, Logan Coal Operators' Association, voluntary associations on behalf of each member thereof, and Harlan County coal operators signatory hereto, and Virginia Coal operators signatory hereto, hereinafter referred to as the Operators, party of the first part, and the International Union United Mine Workers of America and Districts 2, 3, 4, 5, 6, 16,

17, 19, 28, 30, and 31, hereinafter referred to as the Mine workers and on behalf of each member thereof, party of the second part. (New Districts of the United Mine Workers of America may be established in this territory.)

* * * * *

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

This Agreement shall be submitted to the President for his approval under the terms of the Bituminous Coal Code applicable to the territories embraced herein.

This agreement shall become effective April 1, 1934, and shall continue in effect until March 31, 1935.

In witness whereof each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

UNITED MINE WORKERS OF AMERICA,
JOHN L. LEWIS,
President,
PHILIP MURRAY,
Vice-President,

THOMAS KENNEDY,
Secretary-Treasurer,
JAMES MARK,
President Dist. 2,
FRANK HUGHES,
President Dist. 3,
WILLIAM HYNES,
President Dist. 4,
P. T. FAGAN,
President Dist. 5,
PERCY TETLOW,
President Dist. 6,
JAMES E. JONES,
President Dist. 16,
VAN A. BITTNER,
President Dist. 17,
WILLIAM TURNBLAZER,
President Dist. 19,
DALE STAPLETON,
President Dist. 28,
SAM CADDY,
President Dist. 30,
FRANK MILEY,
President Dist. 31,
CHARLES O'NEILL,
WALTER A. JONES,
Eastern Bituminous Coal Association,
ANDREW B. CRICHTON,
WM. W. HILL,
Georges Creek & Upper Potomac Coal Assn.,
TELFORD LEWIS,
Somerset County Coal Operator's Assn.

J. D. A. MORROW,
E. R. GLASS,
Western Pennsylvania Coal Control Assn.,
R. L. IRELAND, JR.,
D. P. HURD,
Ohio Coal Control Association,
J. M. VEST,
J. J. ARDIGO,
Opers. Assn. of Williamson Field,
E. R. PRICE,
THOS. S. HAYMOND,
Big Sandy-Elkhorn Coal Opers. Assn.,
WM. W. MILLER,
Hazard Coal Operators' Exchange,
D. C. KENNEDY,
Kanawha Coal Operators' Association,
HERBERT E. JONES,
H. A. McALLISTER,
Logan Coal Operators' Association.
HARLAN COAL OPERATORS,
N. B. PERKINS,
(Signatory for all companies parties to this Agreement.)
VIRGINIA COAL OPERATORS,
J. D. ROGERS,
Vice President, Stonega Coal & Coke Co.

(Other signatures to be affixed.)

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT
No. 30-60.

Appalachian and Kanawha District Agreements, by and between the Kanawha Coal Operators' Association and the United Mine Workers of America, District 17, and the International Union, effective October 1, 1935, until March 31, 1937, Inclusive.

This Agreement made the 26th day of September, 1935, between the Eastern Bituminous Coal Association, Georges Creek and Upper Potomac Coal Association, Somerset County Coal Operators' Association, Western Pennsylvania Coal Control Association, Ohio Coal Control Association, Michigan Coal Operators' Association, Northern Panhandle of West Virginia Coal Operators Association, Northern West Virginia Subdivisional Coal Association, Operators' Association of the Williamson Field, Big Sandy-Elkhorn Coal Operators' Association, Hazard Coal Operators' Association, Kanawha Operators' Association, Logan Coal Operators' Association, Southern Appalachian Coal Operators' Association, New River Coal Operators' Association, Pocahontas Operators' Association, Winding Gulf Operators' Association, Greenbrier Coal Operators' Association, voluntary associations on behalf of each member thereof, and Harlan County, Kentucky, coal operators signatory hereto, and Virginia coal operators signatory hereto, hereinafter referred to as the Operators, party of the first part, and the International Union, United Mine Workers of America and Districts 2, 3, 4, 5, 6, 16, 17, 19, 24, 28, 30 and 31, hereinafter referred to as the Mine Workers and on behalf of each member thereof party of the second part. (New Districts of the United Mine Workers of America may be established in this territory.)

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

This Agreement shall become effective October 1, 1935, and shall continue in effect to April 1, 1937.

In Witness Whereof each of the parties hereto, pursuant to proper authority, has caused this agreement to be signed by its proper officers.

Note.

Signed by representatives of all districts except Harlan, Hazard, Virginia, and Southern Appalachian.

1:30 A. M., September 27, 1935.

UNITED MINE WORKERS OF AMERICA,
JOHN L. LEWIS,
President,
PHILIP MURRAY,
Vice President,
THOS. KENNEDY,
Secretary-Treasurer,

JAS. MARK,
District 2,
FRANK HUGHES,
District 3,
WM. HYNES,
District 4,
P. T. FAGAN,
District 5,
O. J. OWENS,
District 6,
JOHN T. JONES,
District 16,
VAN A. BITTNER,
District 17,
WM. TURNBLAZER,
District 19,
ERNEST STEVENSON,
District 24,
JOHN SAXTON,
District 28,
SAM CADDY,
District 30,
FRANK MILEY,
District 31.

Operators:
CHARLES O'NEILL,
President,
WALTER A. JONES,
Secretary-Treasurer,
Eastern Bituminous Coal Association,
CHARLES O'NEILL,
President,
WALTER A. JONES,
Secretary-Treasurer,
Central Pennsylvania Coal Producers' Assn.

CHAS. E. H. BROWN,
President, Georges Creek & Upper Pot. Coal Assn.
TELFORD LEWIS,
President, Somerset Co. Coal Operators' Assn.,
J. D. A. MORROW,
President,
BRYON H. CANNON,
Secretary,
Western Pennsylvania Coal Control Assn.,
WM. EMERY, JR.,
Vice President,
D. F. HURD,
Secretary,
Ohio Coal Control Assn.,
WARRAN PIPPEN,
Michigan Coal Operators' Assn.,
WM. TAYLOR,
Nothern Panhandle of W. Va. Coal Operators' Assn.,
S. N. BRADY, JR.,
A. C. BEESON,
Northern W. Va. Subdivisional Coal Assn.,
L. E. WOODS,
President,
JOSEPH J. ARDIGO,
Secretary,
Operators' Assn. of Williamson Field,
THOS. S. HAYMOND,
President,
H. S. HOMAN
Big Sandy-Elkhorn Coal Operators' Assn.

HAZARD COAL OPERATORS' ASSN.,
D. H. MORTON,
D. C. KENNEDY,
KANAWHA COAL OPERATORS' ASSN.,
H. E. JONES, President,
H. A. McALLISTER,
LOGAN COAL OPERATORS' ASSN.,
SOUTHERN APPALACHIAN COAL OPERATORS' ASSN.,
EDW. GRAFF, President,
S. C. HIGGINS, Secretary,
NEW RIVER COAL OPERATORS' ASSN.,
N. L. GARVEY,
Chairman, Labor Committee,
W. E. E. KOEPLER, Secretary,
POCAHONTAS OPERATORS' ASSN.,
L. T. PUTNAM, Vice President,
P. O. GRANEY, Secretary,
WINDING GULF OPERATORS' ASSN.,
J. WADE BELL, President,
WALTER CRICHTON,
Secretary,
GREENBRIER COAL OPERATORS' ASSN.,
HARLAN COUNTY, KY., COAL OPERATORS,
VIRGINIA COAL OPERATORS.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-81.

Wage Agreement between Southern Appalachian Coal Operators' Association and District 19 United Mine Workers of America, effective October 1, 1935, expires April 1, 1937.

Southern Appalachian District Agreement.

Agreement made and entered into between Southern Appalachian Coal Operators' Association, a voluntary association, in behalf of its members signatory hereto, operating coal properties within the territory embraced in District No. 19, United Mine Workers of America, party of the first part, and District No. 19, United Mine Workers of America, on behalf of itself and each of its members, party of the second part.

Witnesseth:

That the Appalachian Agreement, dated September 26th, 1935, is hereby made a part of this Agreement, except as herein modified.

* * * * * *

In Witness Whereof, each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

UNITED MINE WORKERS OF AMERICA, DISTRICT No. 19,
WM. TURNBLAZER.
ROBT. L. CHILDERS.
ROBT. OWENS.
O. E. GASAWAY, Int. Union,
SOUTHERN APPALACHIAN COAL OPERATORS' ASSOCIATION,
By L. C. GUNTER,
Executive Vice-President.

for its members signatory hereto:

SUN COAL COMPANY,
By I. E. BURTIS, President.
NEW JELLICO COAL COMPANY,
By R. L. WILHELM,
DEAN BRANCH COAL COMPANY,
By J. T. BRADLEY,
PRUDEN COAL & COKE COMPANY,
By V. N. HACKER,
VIRGINIA JELLICO COAL COMPANY,
By T. R. MITCHELL,
CLEAR FORD COAL COMPANY,
By S. M. REAMS,
MOORE COAL COMPANY,
By C. M. MOORE,
WILLIAMS COAL MINING COMPANY,
By J. W. WILLIAMS,
TENNESSEE JELLICO COAL COMPANY,
By JOHN W. HOWE, Genl. Supt.,
BLOCK COAL & COKE COMPANY,
By JOHN W. HOWE, Genl. Supt.,
DIAMOND COAL MINING COMPANY,
By H. K. COOK, President,
WIND ROCK COAL & COKE COMPANY,
By W. C. HUTCHESON, Genl. Mgr.
CLINCHMORE COAL MINING COMPANY,

By C. M. MOORE,
FORK MOUNTAIN COAL COMPANY,
By B. E. CHEELY,
SOUTHERN COLLIERIES, INC.,
By B. E. CHEELY,
CAMBRIA COAL COMPANY,
By C. W. HENDERSON, President,
STRAIGHT FORK COAL COMPANY,
By C. W. HENDERSON, Treasurer,
HIGH POINT COAL COMPANY,
By C. W. HENDERSON, Treasurer,
SOUTHERN MINING COMPANY,
By E. C. MAHAN,
HIGNITE COAL COMPANY,
By E. S. HELBURN, President,
CAIRNES COAL MINING COMPANY,
By E. S. HELBURN, President,
BON JELLICO COAL COMPANY,
By J. E. TAYLOR,
BLUE DIAMOND COAL COMPANY,
By FRANK GARLAND,
Vice-President.

The performance of the obligations of the United Mine Workers of America, District No. 19 under the above agreement with the coal companies herein named, members of Southern Appalachian Coal Operators' Association, is guaranteed by the International Union, United Mine Workers of America, and its officers, pursuant to authority empowering them to do so.

Witness the seal of the International Union thereto affixed and the signatures of its proper officers, this ..... day of ....., 1935.

INTERNATIONAL UNION,
UNITED MINE WORKERS
OF AMERICA,
JOHN L. LEWIS,
President,
PHILIP MURRAY,
Vice-President,
THOMAS KENNEDY,
Sec'y-Treas.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-86.

Agreement between the United Mine Workers of America and the Southern Wyoming Coal Operators' Association.

Cheyenne, Wyoming, March 6, 1937.

It is hereby agreed between the Southern Wyoming Coal Operators' Association and the representatives of District 22, United Mine Workers of America, that the following scale of Wages, Rules, Regulations, and Working Conditions shall be in effect from and including April 1, 1937, to and including March 31 1939. This Agreement succeeds and takes the place of the agreement dated Cheyenne, Wyoming, December 19, 1935.

* * * * *

Maximum Hours and Working Time.

Sec. 7. No employee, except members of the executive, supervisory, clerical, technical and confidential personnel,

shall be employed in excess of seven hours per day and five days per week, subject to the execptions hereinafter stated.

(a) Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

(b) Overtime: Work by Mine Workers paid by hour or day in excess of seven (7) hours in one day or thirty-five (35) hours in anyone week shall be paid for at the rate of time and one-half with the following exceptions:

(c) Employes engaged at power houses, substations, and pumps operating continuously for twenty-four (24) hours daily and especially exempted from the seven (7) hour day and the time and one-half provisions. Special exemptions for individual employes other than those named above when twenty-four (24) hours continuous operation daily is required are subject to arrangement between mine management and district officers without time and one-half for overtime. Employes so especially exempted are limited to eight (8) hours per day and forty (40) hours per week and time and one-half for time worked in excess thereof.

(d) The seven (7) hour day, five (5) day week (35 hours per week) as provided in this Agreement, shall prevail.

Sec. 8. The following classes of Mine Workers are excepted from the foregoing provisions as to the maximum hours of work:

(a) All Mine Workers engaged in the transportation of men and coal shall work the additional time necessary to handle man trips and/or haulage animals and all coal in transit and shall be paid the regular hourly rate for the first seven (7) hours and time and one-half for all overtime.

(b) Outside employes engaged in the dumping, handling and preparation of coal, and the manufacture of coke, shall work the additional time necessary, not to exceed thirty (30) minutes, to dump and prepare the coal delivered to the tipple each shift, and shall be paid the regular hourly rates for the first seven (7) hours and time and one-half for overtime not to exceed the thirty (30) minutes hereinbefore stated.

(c) When day men go into the mine in the morning, they shall be entitled to two hours' pay whether or not the mine works the full two hours, but, after the first two hours, the men shall be paid for every hour thereafter by the hour, for each hour's work or fractional part thereof. If for any reason the regular routine work cannot be furnished inside day men, the employer may furnish other than the regular work.

(d) The following holidays will be recognized: Sundays, Christmas Day, New Year's Day, Thanksgiving, April 1st, Declaration Day, Fourth of July, Armistice Day, and Labor Day. It is understood and agreed that the suspension of production on Sundays and other holidays above enumerated shall not extend to monthly men or to those engaged in the making of necessary repairs or emergency work.

Sec. 9. The operation shall lay all permanent tracks in entries, the miners and loaders laying entry and room rails as heretofore. The operator agrees to maintain and repair all track in room and entries, when tracklaying by the miners has been done in a workmanlike manner. Where track is broken to bring back pillars, or where track must be laid to end of pillar to bring back same, the Operator shall lay track to face of coal.

* * * * *

SOUTHERN WYOMING COAL
OPERATORS' ASSOCIATION,
By T. J. O'BRIEN, President,
L. W. MITCHELL,
Executive Secretary,
UNITED MINE WORKERS OF
AMERICA, DISTRICT 22,
By J. M. ROSS, President,
ALBERT ROBERTS,
Vice-President,
VIRGIL WRIGHT,
Secretary-Treasurer.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-95.

Interstate and District Contract for Shaft Mines Holding Membership in the Southwestern Interstate Coal Operators' Association District No. 14, between the United Mine Workers of America and the Southwestern Interstate Coal Operators' Association.

For a period Beginning April 1st, 1937, and Ending March 31st, 1939.

* * * * *

Seven-Hour Day.

Section II.

Article 1. For all classes of labor, except as otherwise provided, seven hours shall constitute a day's work and thirty-five hours a week. Time and one-half to be paid for all over seven hours worked in any one day or thirty-five hours in any one week.

The going to and coming from the respective working places is to be done on the employee's own time. All day men shall perform whatever labor the foreman may direct. A seven-hour day means seven hours' work at the usual working places, exclusive of noon-time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night. The operator may refuse to allow any day man to work on any day on which he fails to be at his working place at the starting time.

* * * * * * *

In behalf of the Southwestern Interstate Coal Operators' Association:

K. A. SPENCER,
President
BERNARD HARRIGAN,
Commissioner.

In behalf of the United Mine Workers of America:

HENRY ALLAI,
President, District 14,
JOSEPH E. HROMEK,
Secretary-Treasury, District 14,
JOHN L. LEWIS,
International President of
U. M. W. of A.
By HENRY ALLAI.

Adopted at Pittsburg, Kansas, May 13th, 1937.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-97.

Agreement.

This Agreement, made and entered into this first day of April, 1937, by and between Coal Producers of Colorado and New Mexico, signatory hereto, parties of the first part, each for itself and not for the other, said parties of the first part being hereinafter, for convenience, referred to as the Producers, and the United Mine Workers of America, District No. 15, hereinafter referred to as the Mine Workers, and on behalf of each member thereof, party of the second part:

* * * * *

Maximum Hours and Working Time.

Section 1. Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

Overtime.

* * * * *

Drivers shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no

case shall the driver's time be docked while he is waiting for such cars at the point named. The method at present existing covering the harnessing and unharnessing of mules shall be continued throughout the life of this Agreement.

* * * * *

This Agreement shall become effective April 1, 1937, and shall terminate April 1 1939.

In witness whereof, each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

Producers:

CALIENTE COAL COMPANY,
By S. M. THOMPSON, President,
HUERFANO COAL COMPANY,
By N. C. ANDERSON,
General Manager,
MOFFAT COAL COMPANY,
By B. W. SNODGRASS,
JUANITA COAL & COKE COMPANY,
By J. S. BOWIE,
THE CALUMET FUEL COMPANY,
By A. C. WATTS,
Assistant Manager,
AMERICAN INDEPENDENT COAL MINES,
By D. L. HANSEN,
MINNEQUA FUEL COMPANY,
By ROBERT TURNER, President,
PRYOR COAL MINING COMPANY,
By W. H. DONOVAN,
Vice President,

THE GORDON COAL COMPANY,
By GEORGE B. DICK,
General Manager,
THE JEWELL COLLIERIES CORPORATION,
By GEORGE B. DICK,
General Manager,
THE DICK COAL COMPANY,
By GEORGE B. DICK,
General Manager,
AZTEC COAL MINING COMPANY,
By GEORGE B. DICK,
NUSHAFT CANON COAL COMPANY,
By J. H. GOODMAN, Secretary,
BEAR CANON COAL COMPANY,
By WM. G. PLESTED, Manager,
KEYSTONE COAL COMPANY,
By JOHN CONNELL, President,
BEAR RIVER COAL COMPANY,
By JOHN CONNELL, Secretary,
THE VICTOR-AMERICAN FUEL COMPANY,
By C. C. DEITER, Vice-President,
COLORADO & UTAH COAL COMPANY.
By MERRITT HUTTON, Manager,
KERR COAL COMPANY,
By W. M. KERR,
HAYDEN COAL COMPANY,
By HOMER H. HARRIS, President,
THE TEMPLE FUEL COMPANY,

By F. R. WOOD, President,
THE VICKERS COAL COMPANY,
By F. R. WOOD, President,
THE ROCKY MOUNTAIN FUEL COMPANY,
By J. P. PEABODY,
President and General Manager.
By JOHN R. LAWSON,
Vice-President,
ST. LOUIS ROCKY MOUNTAIN & PACIFIC COMPANY,
By J. VAN HOUTEN, President,
SHAMROCK COAL COMPANY,
By J. E. HATCHER,
REDWOOD MINING COMPANY,
By T. J. SWEET,
TORRID COAL COMPANY,
By STONE & McPHAIL,
NUGGET MINE,
By JOE MALONEY,
RED ASH COAL COMPANY,
By M. J. JUDISCEK,
FORBES MINE,
By W. H. OWEN,
DELDOSSO COAL COMPANY,
By JOHN D. DELDOSSO,
ROUSE COAL COMPANY,
By BERES & BOSCIA,
SPRING CANON COAL COMPANY
By JAMES A. McCUNE,
MAJOR COAL COMPANY,
By THOMAS UGOLINI,
THE THOR FUEL COMPANY,
By J. R. BICKERTON,

STRAWBERRY MINE,
By JOHN FODERARO,
W. A. REAM COAL COMPANY,
By W. A. REAM,
BLACK HILLS COAL COMPANY,
By ALBERT AMIDAY,
BLACK HAWK COAL COMPANY,
By E. H. JENKINS,
GIORDANA COAL COMPANY,
By JOE GIORDANO,
CADDELL COAL COMPANY,
By ED CADDELL,
OLIVER COAL COMPANY,
By J. HORGARD,
RIVERVIEW COAL MINE,
By LOUIS SUPANCIC,
GARFIELD COAL COMPANY,
By WALTER SCOTT
CLARKE COAL COMPANY,
By R. M. CLARKE;
MIDWEST MINE,
By WM. HUGHES,
MARTIN COAL COMPANY,
By RICHARD MARTIN,
BLAR COAL & COKE COMPANY,
By TONY BEAR,
EDWARDS COAL MINE,
By GEORGE W. EDWARDS,
PALISADE CLEAN HEAT COAL COMPANY,
By W. R. SOMERVILLE,
MOUNTAIN VIEW COAL COMPANY,

By NICKIE ROCCHIO,
MANLEY COAL COMPANY,
By WM. MANLEY,
CANON BLACK DIAMOND COAL CO.,
By JOE YELLICO,
CANON ZENITH COAL COMPANY,
By JOE ZENO DUCA,
CANON IMPERIAL COAL COMPANY,
By FRANK SANTARELLI,
ROYAL GORGE COAL COMPANY,
By JOHN P. THOMAS, JR.,
Secretary-Treasurer,
BLUE RIBBON COAL COMPANY,
By ROBT. DONALDSON,
CANON RELIANCE FUEL COMPANY,
By H. H. PINKNEY,
BROOKSIDE COAL MINING COMPANY,
By FRANK ORECCHIO, President,
CANON IDEAL COAL COMPANY,
By LOUIS DALSANDRO,
GIULIANO-CARPINE COAL COMPANY,
By JOHN G. GIULIANO, President,
FAWN HALLOW COAL COMPANY,
By FLORIJAN ADAMIC,
COAL CREEK CANON COAL CO.,

By JAKE CARASTIA,
EVANS COAL CO.,
By RICHARD EVANS,
CUCKOO COAL CO.,
By H. B. DUNN,
GRAND PRIZE COAL CO.,
By H. B. DUNN,
DOUBLE DICK COAL MINE,
By TONY SANTARELLI,
RIVERSIDE FARMERS MINE,
By JOHN McDOWELL
THE BALD COAL COMPANY,
By JOHN B. BALD,
AMERICAN INDEPENDENT MINE,
PRICE AND NEWELL,
By OWEN PRICE,
CANON MONARCH COAL COMPANY,
By W. J. BEER,
PINE GULCH COAL COMPANY,
By HERMAN WEST,
CANON PEACOCK COAL COMPANY,
By FOSTER W. RANSON,
CANON RED ARROW COAL COMPANY, INC.,
By ADOLPH FIORINA,
LITTLE JOHNNY COAL COMPANY,
By JOHN LIPPIS,
CANON BLACK HAWK COAL COMPANY,
By ALEX BELTRAMO,
MOSCHETTI COAL COMPANY,
By DOM MOSCHETTI,

CALDIROLA COAL CO.,
By C. J. CALDIROLA,
GRIFFITHS COAL MINING CO.,
By W. R. GRIFFITHS,
CANON OLD SLOPE,
By CHARLES BUFMACK,
PERINO COAL CO.,
By JAMES PERINO,
CANYON TIGER COAL COMPANY,
By HOLT AND CORDRAY,
UNITED MINE WORKERS OF AMERICA,
By JOHN L. LEWIS, President,
Per FRANK HEFFERLY,
Representative,
DISTRICT 15, UNITED MINE WORKERS OF AMERICA,
By FRANK HEFFERLY,
President, District 15,
U. M. W. of A.,
By O. F. NIGRO,
International Board Member and Secretary-Treasurer, District 15, U. M. W. of A.,
MEMBERS SCALE COMMITTEE, DISTRICT 15, U. M. W. OF A.,

Sub-District 2:
By C. I. DAVIES,
By J. P. FRERE
By TONY KATTNIG.

Sub-District 3:
By ED MUNDEN,
By MIKE FERDERBER,
By CON LUCERO.

Sub-District 4:
By ED MUNDEN,
By JAMES D. BARCLAY,
By FRANK A. SEVESTRE.

Sub-District 5:
By PAUL FICKLE,
By PETER MOERTH,
By JOE PONCHUR.

Sub-District 6:
By JOHN W. HARMON,
By ELWOOD HORTON,
By JOHN DAUGHERTY.

Sub-District 7:
By EBEN JONES,
By JOHN VIECELLI,
By ANTONIO S. TRUJILLO.

4700 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-102.

Wage Agreement Between Southern Appalachian Coal Operators' Association and District 19 United Mine Workers of America, Effective April 1, 1937, Expires March 31, 1939.

Southern Appalachian District Agreement.

Agreement made and entered into between Southern Appalachian Coal Operators' Association, a voluntary association, in behalf of its members signatory hereto, operating coal properties within the territory embraced in District No. 19, United Mine Workers of America, party

of the first part, and District No. 19, United Mine Workers of America, on behalf of itself and each of its members, party of the second part.

Witnesseth:

* * * * *

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis, except in cases of accident which temporarily necessitates longer hours for those mine workers required on account thereof; and also excepting that number of mine workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

In Witness Whereof, each of the parties hereto, pursuant to proper authority, has caused this agreement to be signed by its proper officer.

UNITED MINE WORKERS OF AMERICA, DISTRICT No. 19,
WM. TURNBLAZER,
President,
L. T. ARNETT,
Vice-President,
ROBT. L. CHILDERS,
Sec'y-Treas.,
SAM BOOTH,
Committeeman,
FRANK DOBBIN,
Int'l Rep.

SOUTHERN APPALACHIAN
COAL OPERATORS' ASSOCIATION,
By L. C. GUNTER,
Executive Vice-President.

For its members signatory hereto:

CLINCHMORE COAL MINING COMPANY,
By C. M. MOORE.
MOORE COAL COMPANY,
By C. M. MOORE.
SOUTHERN COLLIERS, INC.,
By E. M. MAHAN.
SOUTHERN MINING COMPANY,
By E. C. MAHAN.
FORK MOUNTAIN COAL COMPANY,
By E. C. MAHAN.
PRUDEN COAL COMPANY,
By V. N. HACKER, President.
CAMBRIA COAL COMPANY,
By C. W. HENDERSON.
SUN COAL COMPANY,
By C. W. HENDERSON.
HIGH POINT COAL COMPANY,
By C. W. HENDERSON.
STRAIGHT FORK COAL COMPANY,
By C. W. HENDERSON.
CLEAR FORK COAL & COKE COMPANY,
By S. M. REAMS, President.

PREMIER COAL COMPANY,
By W. E. CABELL, President.
WIND ROCK COAL & COKE COMPANY,
By W. C. HUTCHESON,
NEW JELLICO COAL COMPANY,
By R. L. WILHELM.
HIGNITE COAL COMPANY,
By E. S. HELBURN,
CAIRNES COAL MINING COMPANY,
By E. S. HELBURN,
BLACK DIAMOND COAL MINING COMPANY,
By C. S. BLAIR.
BLUE DIAMOND COAL COMPANY,
By FRANK GARLAND.
BLOCK COAL & COKE COMPANY,
By JOHN W. HOWE, General Supt.
TENNESSEE JELLICO COAL COMPANY,
By JOHN W. HOWE, General Supt.
WILLIAMS COAL MINING COMPANY,
By J. W. WILLIAMS, President.

The performance of the obligations of the United Mine Workers of America, District No. 19, under the above agreement with the coal companies herein named, members of the Southern Appalachian Coal Operators' Association, is guaranteed by the International Union, United Mine Workers of America, and its officers, pursuant to authority empowering them to do so.

Witness the seal of the International Union hereto affixed and the signature of its proper officers, this 2nd day of April, 1937.

INTERNATIONAL UNION
UNITED MINE WORKERS OF AMERICA,
JOHN L. LEWIS, President,
PHILIP MURRAY,
Vice-President.
THOMAS KENNEDY,
Sec'y-Treas.

4703 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-104.

Southern Appalachian District Agreement.

Agreement made and entered into between Southern Appalachian Coal Operators' Association, a voluntary Association, in behalf of its members signatory hereto, operating coal properties within the territory embraced in District No. 19, United Mine Workers of America, party of the first part, and District No. 19, United Workers of America, on behalf of itself and each of its members, party of the second part.

Witnesseth:

That the Appalachian Agreement, dated April 2, 1937, is hereby made a part of this Agreement, except as herein modified.

The parties hereto further covenant and agree as follows:

* * * * *

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis, except in cases of accident which temporarily necessitate longer hours for those mine workers required on account thereof; and also excepting that number of mine workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

When day men go into the mine in the morning they shall be entitled to two hours' pay whether or not the mine works the full two hours, but after the first two hours, the men shall be paid for every hour thereafter, by the hour, for each hour's work or fractional part thereof. If, for any reason, the regular routine work cannot be furnished inside day men, the employer may furnish other than the regular work.

Drivers shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named. The method at present existing, covering the harnessing and unharnessing of mules, shall be continued throughout the life of this agreement.

Motormen and trip riders shall be at the passway where they receive the cars, at starting time. The time required to take motors to the passway at starting time and depart-

ing from the same at quitting time shall not be regarded as part of the day's labor, their time beginning when they reach the change or parting at which they receive cars, but in no case shall their time be docked while waiting for cars at the point named.

* * * * *

This agreement shall become effective on April 2, 1937, and shall continue in effect until the first day of April, 1939, except as modified as follows:

* * * * *

In Witness Whereof, each of the parties hereto, pursuant to proper authority, has caused this agreement to be signed by its proper officers.

UNITED MINE WORKERS OF AMERICA, DISTRICT No. 19,
WM. TURNBLAZER,
President,
L. T. ARNETT,
Vice-President,
ROBT. L. CHILDERS,
Sec'y-Treas.,
SAM BOOTH,
Committeeman,
FRANK DOBBIN,
Int'l Rep.
SOUTHERN APPALACHIAN COAL OPERATORS' ASSOCIATION,
By L. C. GUNTER,
Executive Vice-President.

For its members signatory hereto:

CLINCHMORE COAL MINING COMPANY,
By C. M. MOORE.
MOORE COAL COMPANY,

By C. M. MOORE.
SOUTHERN COLLIERIES, INC.
By E. C. MAHAN.
SOUTHERN MINING COMPANY,
By E. C. MAHAN.
FORK MOUNTAIN COAL COMPANY,
By E. C. MAHAN.
PRUDEN COAL COMPANY,
By V. N. HACKER, President.
CAMBRIA COAL COMPANY
By C. W. HENDERSON.
SUN COAL COMPANY,
By C. W. HENDERSON.
HIGH POINT COAL COMPANY,
By C. W. HENDERSON.
STRAIGHT FORK COAL COM-
By C. W. HENDERSON.
CLEAR FORK COAL & COKE COMPANY,
By S. M. REAMS, President.
PREMIER COAL COMPANY,
By W. E. CABELL, President.
WIND ROCK COAL & COKE COMPANY,
By W. C. HUTCHESON.
NEW JELLICO COAL COMPANY,
By R. L. WILHELM.
HIGNITE COAL COMPANY,
By E. S. HELBURN.
CAIRNES COAL MINING COMPANY,

By E. S. HELBURN.
BLACK DIAMOND COAL MINING CO.,
By C. S. BLAIR.
BLUE DIAMOND COAL COMPANY,
By FRANK GARLAND.
BLOCK COAL & COKE CO.,
By JOHN W. HOWE, General Supt.
TENNESSEE JELLICO COAL CO.,
By JOHN W. HOWE, General Supt.
WILLIAMS COAL MINING CO.,
By J. W. WILLIAMS, President.

The performance of the obligations of the United Mine Workers of America, District No. 19, under the above agreement with the coal companies herein named, members of the Southern Appalachian Coal Operators' Association, is guaranteed by the International Union, United Mine Workers of America, and its officers, pursuant to authority empowering them to do so.

Witness the seal of the International Union hereto affixed and the signature of its proper officers, this 2nd day of April, 1937.

INTERNATIONAL UNION
UNITED MINE WORKERS OF AMERICA,
JOHN L. LEWIS, President,
PHILIP MURRAY,
Vice-President.
THOMAS KENNEDY,
Sec'y-Treas.

4706 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-105.

Appalachian Agreement and Agreement Entered Into Between the Coal Operators Association of the Thick Vein Freeport Seam of Penna. Including Thin Vein Freeport Seam and District No. 5—United Mine Workers of America, Effective April First, 1937.

Appalachian Agreement.

1. This Agreement, made the 2nd day of April, 1937, between the Central Pennsylvania Coal Producers Association, Georges Creek and Upper Potomac Coal Association, Somerset County Coal Producers Association, Ohio Coal Control Association Michigan Coal Operators' Association, Northern Panhandle of West Virginia Coal Operators' Association, Northern West Virginia Subdivisional Coal Association, Operators' Association of Williamson Field, Big Sandy-Elkhorn Coal Operators' Association, Hazard Coal Operators' Association, Kanawha Coal Operators' Association, Logan Coal Operators' Association, Southern Appalachian Coal Operators' Association, New River Coal Operators' Association, Pocahontas Operators' Association, Winding Gulf Operators' Association, Greenbrier Coal Operators Association, Upper Buchanan Smokeless Coal Operators Association, Voluntary associations on behalf of each member thereof, and Harlan County, Ky., coal operators, signatory hereto, and Virginia coal operators, signatory hereto, hereinafter referred to as the Operators, party of the first part, and the International Union, United Mine Workers of America, and Districts 2, 3, 4, 5, 6, 16, 17, 19, ,24, 28, 30 and 31, hereinafter referred to as the Mine Workers and on behalf of each member thereof, party of the second part. (New Districts of the United Mine Workers of America may be established in this territory.)

* * * * *

Maximum Hours and Working Time.

5. Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * * *

59. This Agreement shall become effective April 2, 1937, and shall continue in effect to March 31, 1939.

60. In Witness Whereof, each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

OPERATORS:
CHARLES O'NEILL,
President,
WALTER A. JONES,
Secretary-Treasurer,
Central Pennsylvania Coal Producers' Association.
ARTHUR B. STEWART,
B. H. McCRACKEN,
Georges Creek & Upper Potomac Coal Association.
W. E. MILLER,
President,

MARTIN L. MARKEL,
Secretary,
Somerset County Coal Operators' Association.
J. D. A. MORROW,
President,
BYRON H. CANON,
Secretary,
Western Pennsylvania Coal Producers' Association.
R. L. IRELAND, JR.,
President,
FRED HURD,
Secretary,
Ohio Coal Control Association.

MICHIGAN COAL OPERATORS' ASSOCIATION:
WILLIAM TAYLOR,
For the Valley Camp Coal Co. and its subsidiary companies in the Northern Panhandle of West Virginia.
GEO. S. BRACKETT,
Chairman, Scale Committee,
A. C. BEESON,
Northern West Virginia Subdivisional Coal Association.
L. E. WOODS,
President,
JOSEPH J. ARDIGO,
Secretary,
Operators' Association of Williamson Field.
THOS. S. HAYMOND,
President,

HARRY S. HOMAN,
Secretary,
Big Sandy-Elkhorn Coal Operators' Association.

HAZARD COAL OPERATORS' ASSOCIATION:
D. H. MORTON,
WM. W. MILLER,
Kenawha Coal Operators' Association.
ARTHUR DOWNING, President.
H. A. McALLISTER,
Logan Coal Operators' Association.
WM. G CAPERTON,
President,
S. C. HIGGINS,
Secretary,
New River Coal Operators' Association.
M. L. GARVEY,
J. J. LINCOLN,
W. E. E. KOEPLER,
Pocahontas Operators' Association.
L. T. PUTMAN, President,
P. C. GRANEY, Secretary,
Winding Gulf Operators' Association.
J. W. RAINE, President.
WM. CRICHTON, JR., Secretary,
Greenbrier Coal Operators' Association.
C. A. HAMMILL, President,

W. W. WOOD, Secretary,
Upper Buchanan Smokeless
Coal Operators' Association.

UNITED MINE WORKERS OF AMERICA:
JOHN L. LEWIS,
President,
PHILIP MURRAY,
Vice-President,
THOMAS KENNEDY,
Secretary-Treasurer,
JAMES MARK,
President, Dist. 2.
FRANK HUGHES,
President, Dist. 3.
WILLIAM HYNES,
President, Dist. 4.
P. T. FAGAN,
President, Dist. 5.
JOHN OWENS,
President, Dist. 6.
JOHN T. JONES,
President, Dist. 16.
VAN A. BITTNER,
President, Dist. 17.
WM. TURNBLAZER,
President, Dist. 19.
JOHN HATTON,
President, Dist. 24.
JOHN SAXTON,
President, Dist. 28.
SAM CADDY,
President, Dist. 30.
FRANK MILEY,
President, Dist. 31.

Attest:

D. C. KENNEDY,
Chairman, Appalachian Conference.
THOMAS KENNEDY,
Secretary.
S. C. HIGGINS,
Assistant Secretary.
DAVID J. McDONALD,
Assistant Secretary.
HARRY G. KENNEDY.
Assistant Secretary.

4709 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-116.

Agreement Between United Mine Workers of America, District No. 10, and Coal Producers of Washington, to be in Force From April 23, 1937, to March 31, 1939.

* * * * *

It is hereby agreed by and between the Coal Producers of Washington, Parties of the first part, and the United Mine Workers of America and their District No. 10, parties of the second part, the following General provisions, daily wage rates, tonnage rates, and rates covering yardage, dead work, and special conditions are in full force and effect. It is further agreed that this contract is for the exclusive joint use and benefit of the contracting parties, as heretofore defined and set forth in this agreement; and it shall be construed as binding upon and effective in determining only the relations with each other of those represented by the parties signatory hereto.

* * * * *

Maximum Hours and Working Time.

Sec. 2. No employe, except members of the executive, supervisory, clerical, technical and confidential personnel, shall be employed in excess of seven hours per day and five days per week, subject to the exceptions hereinafter stated.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

Signed on Behalf of United Mine Workers of America, District No. 10:

SAM NICHOLLS, President.
RICHARD FRANCIS, Secretary.

Scale Committee:

S. J. BROZOVICH,
WM. J. MERRIMAN,
WILLIAM CLARK,
SAM DOWNEY,
J. P. BOOS,
NICK HUBBER.

Signed on Behalf of Coal Producers of Washington:

D. R. SWEM,
JAMES BAGLEY,
R. W. SMITH,
E. G. RICHARDS,
JNO. E. MORGAN.

4711 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-121.

Agreement Between the United Mine Workers of America and Utah Coal Operators.

Section 1. This agreement, made the 24th day of May, 1937, between the Utah Coal Operators signatories hereto, hereinafter referred to as the Operators, parties of the first part; and the International Union, United Mine Workers of America, and on behalf of each member thereof, party of the second part. * * *

* * * * *

Maximum Hours and Working Time.

Sec. 3. Seven hours of labor shall constitute a day's work. The seven hour day means seven hours work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis, except in cases of accident which temporarily necessitates longer hours for those mine workers required on account thereof; and also excepting that number of mine workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

Sec. 105. This Agreement shall become effective April 1, 1937, and shall continue in effect until the 1st day of April, 1939.

In Witness Whereof: Each of the parties hereto, pursuant to proper authority, has caused this Agreement to be signed by its proper officers.

INTERNATNONAL UNION, UNITED MINE WORKERS OF AMERICA:
JOHN L. LEWIS,
President, United Mine Workers of America.

For United Mine Workers of America:
JOHN M. ROSS,
President, District No. 22, U. M. W. of A.
ALBERT ROBERTS,
Vice Pres., Dist. No. 22, U. M. W. of A.
VIRGIL WRIGHT,
Sec.-Treas., Dist. No. 22, U. M. W. of A.

FOR UTAH COAL OPERATORS:
A. C. WATTS,
President, Scale Committee.
B. P. MANLEY,
Secretary, Scale Committee.

UTAH COAL OPERATORS:
BLUE BLAZE COAL CO.,
By W. C. STARK, Vice President.
CHESTERFIELD COAL CO.
By E. L. CROPPER,
Sec-Treas. & Mgr.

INDEPENDENT COAL & COKE CO.,
By PAUL KEYSER, President.
LIBERTY FUEL CO.,
By L. R. WEBER, President.
LION COAL CORPORATION,
By ROBERT Y. GIBSON, President.
MUTUAL COAL COMPANY,
By JOHN R. DOOLIN,
Vice President.
MacLEAN COAL COMPANY,
By L. C. McFARLANE,
Vice President.
NATIONAL COAL COMPANY,
By F. A. SWEET, JR.,
Vice President.
PEERLESS SALES COMPANY,
By EZRA THOMPSON, President.
ROYAL COAL COMPANY,
By L. E. ADAMS, Vice President.
SPRING CANYON COAL COMPANY,
By L. E. ADAMS, Vice President.
STANDARD COAL COMPANY,
By C. N. SWEET, President.
SWEET COAL COMPANY,
By V. W. SWEET, General Manager.
UNITED STATES FUEL CO.,
By OTTO HERRES, Vice-President.
UTAH FUEL CO.,
By MORONI HEINER, President.
GEORGE A. SCHULTZ,
By GEORGE A. SCHULTZ.

4714 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT 30-122.

Interstate and District Contract for Strip Mines Holding Membership in the Southwestern Interstate Coal Operators' Association, District No. 14, Between the United Mine Workers of America and the Southwestern Interstate Coal Operators' Association.

Adopted at Pittsburg, Kansas, August 9th, 1937, for a Period Beginning April 1st, 1937, and Ending March 31st, 1939.

* * * * *

Seven-Hour Day.

Section II.

Article I. For all classes of labor, except as otherwise provided, seven hours shall constitute a day's work and thirty-five hours a week. Time and one-half to be paid for all over seven hours worked in any one day or thirty-five hours in any one week.

The going to and coming from the respective working places is to be done on the employee's own time. All day men shall perform whatever labor the foreman may direct. A seven-hour day means seven hours' work at the usual working places, exclusive of noon-time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night. The operator may refuse to allow any day man to work on any day on which he fails to be at his working place at the starting time.

* * * * *

In behalf of the Southwestern Interstate Coal Operators' Association:

GEO. K. MACKIE, JR.,
President,
BERHARD HARRIGAN,
Commissioner.

In behalf of the United Mine Workers of America:

HENRY ALLAI,,
President District 14.
JOSEPH E. HROMEK,
Secretary-Treasurer District 14.
LOUIS BOURLARD, JR.,
H. T. MULLIS,
Scale Committee.
JOHN L. LEWIS,
International President U. M. W. of A.
By HENRY ALLAI.

4716 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-131.

Appalachian Agreement.

This Agreement, made the 12th day of May, 1939, between the Central Pennsylvania Coal Producers' Association, Georges Creek and Upper Potomac Coal Association, Somerset County Coal Operators' Association, Western Pennsylvania Coal Operators' Association, Ohio Coal Association, Michigan Coal Operators' Association, Northern Panhandle of West Virginia Coal Operators' Association, Northern West Virginia Coal Association, Operators' As-

sociation of Williamson Field, Big Sandy-Elkhorn Coal Operators' Association, Hazard Coal Operators' Association, Kanawha Coal Operators' Association, Logan Coal Operators' Association, Southern Appalachian Coal Operators' Association, New River Coal Operators' Association, Pocahontas Operators' Association, Winding Gulf Operators' Association, Greenbrier Coal Operators' Association, Upper Buchanan Smokeless Coal Operators' Association, and Virginia Coal Operators' Association, voluntary associations on behalf of each member thereof, hereinafter referred to as the Operators, party of the first part, and the International Union, United Mine Workers of America, and Districts 2, 3, 4, 5, 6, 16, 17, 19, 24, 28, 30 and 31, hereinafter referred to as the Mine Workers and on behalf of each member thereof party of the second part. (New Districts of the United Mine Workers of America may be established in this territory.)

Witnesseth: It is agreed that this contract is for the exclusive joint use and benefit of the contracting parties as heretofore defined and set forth in this Agreement. It is agreed that the United Mine Workers of America is recognized herein as the exclusive bargaining agency representing the employes of the parties of the first part. It is agreed that as a condition of employment all employees shall be members of the United Mine Workers of America, except in those exempted classifications of employment as provided in this contract, (see note). It is the intent and purpose of the parties hereto that this Agreement will promote an improved industrial and economic relationship in the bituminous coal industry, and to set forth herein the basic agreements covering rates of pay, hours of work, and conditions of employment to be observed between the parties in the following districts constituting the Appalachian Territory:

Northern Territory—Pennsylvania, Michigan, Ohio, together with Ohio, Brooke, Hancock and Marshall Counties of West Virginia, and Northern West Virginia, including Counties of Barbour, Braxton, Calhoun, Doddridge, Gilmer, Harrison, Jackson, Lewis, Marion, Monongalia, Pleasants, Preston, Randolph, Ritchie, Roane, Taylor, Tyler, Upshur, Webster, Wetzel, Wirt, Wood, and that portion of Nicholas County including mines served by the Baltimore and Ohio Railroad and north, Maryland and Upper Potomac District, including Grant, Mineral and Tucker Counties of West Virginia.

Southern Territory—The State of Virginia, Northern Tennessee, that part of Kentucky lying east of a line drawn north and south through the City of Louisville, and that part of West Virginia not included in Northern territory.

* * * * *

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

* * * * *

When day men go into the mine in the morning, they shall be entitled to two hours' pay whether or not the mine works the full two hours, but, after the first two hours, the men shall be paid for every hour thereafter

by the hour, for each hour's work or fractional part thereof. If for any reason the regular routine work can not be furnished inside day men, the employer may furnish other than the regular work.

Drivers shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named. The method at present existing covering the harnessing and unharnessing of mules shall be continued throughout the life of this Agreement.

Motormen and trip riders shall be at the passway where they receive the cars at starting time. The time required to take motors to the passway at starting time and departing from the same at quitting time shall not be regarded as a part of the day's labor, their time beginning when they reach the change or parting at which they receive cars, but in no case shall their time be docked while waiting for cars at the point named.

* * * * *

This Agreement shall become effective May 12, 1939, and shall continue in effect to March 31, 1941.

In Witness Whereof, each of the parties hereto, pursuant to proper authority, has caused this agreement to be signed by its proper officers.

UNITED MINE WORKERS OF AMERICA:
JOHN L. LEWIS, President,
PHILIP MURRAY, Vice President,
THOMAS KENNEDY, Secy.-Treas.
JAMES MARK,
Pres., District 2.

FRANK HUGHES,
Pres., District 3.
WILLIAM HYNES,
Pres., District 4.
P. T. FAGAN,
Pres., District 5.
JOHN OWENS,
Pres., District 6.
JOHN T. JONES,
Pres., District 16.
VAN A. BITTNER,
Pres., District 17.
WM. TURNBLAZER,
Pres., District 19.
JOHN HATTON,
Pres., District 24.
JOHN SAXTON,
Pres., District 28.
SAM CADDY,
Pres., District 30.
FRANK MILEY,
Pres., District 31.

OPERATORS:
CENTRAL PENNSYLVANIA COAL PRODUCERS' ASSOCIATION,
CHARLES O'NEIL, President,
WALTER A. JONES, Secy-Treas.
SOMERSET COUNTY COAL OPERATORS ASSN.,
W. E. MILLER, President,
MARTIN L. MARKEL, Secretary.

WESTERN PENNSYLVANIA COAL OPERATORS' ASSOCIATION,
J. D. A. MORROW, President,
BYRON H. CANNON, Secretary.

OHIO COAL ASSOCIATION,
R. L. IRELAND, JR., President,
D. F. HURD, Secretary.

NORTHERN PANHANDLE OF WEST VIRGINIA COAL OPERATORS' ASSN.,
R. L. BERRY, President,
GEO. A. BLACKFORD, Secretary.

GEORGES CREEK AND UPPER POTOMAC COAL ASSOCIATION,
ARTHUR B. STEWART,
B. H. McCRACKIN.

OPERATORS' ASSOCIATION OF WILLIAMSON FIELD,
L. E. WOODS, President,
J. J. ARDIGO, Secretary.

KANAWHA COAL OPERATORS' ASSOCIATION,
W. C. MITCHELL, Vice-President,
D. C. KENNEDY, Executive Secy.

LOGAN COAL OPERATORS' ASSOCIATION,
ARTHUR DOWNING, President,
H. A. McALLISTER, Exec. Direc.

NEW RIVER COAL OPERATORS' ASSOCIATION,
P. C. THOMAS, Vice President,
S. C. HIGGINS, Secretary.

POCAHONTAS OPERATORS' ASSOCIATION,
O. L. ALEXANDER, Committee,
P. P. KERR, Committee,
W. E. E. KOEPLER, Secretary.

WINDING GULF OPERATORS' ASSOCIATION,
L. T. PUTNAM, President,
P. C. GRANEY, Secretary,

GREENBRIER COAL OPERATORS' ASSOCIATION,
W. S. LECKIE.

UPPER BUCHANAN SMOKELESS COAL OPERATORS' ASSOCIATION,
C. A. HAMILL, President,
W. W. WOOD, Secretary.

SOUTHERN APPALACHIAN COAL OPERATORS' ASSOCIATION,
L. C. GUNTER, President.

MICHIGAN COAL OPERATORS' ASSOCIATION,
JOHN CARYELL, President,
FRANK R. HEATH, Secretary.

VIRGINIA COAL OPERATORS' ASSOCIATION,
GEO. H. ESSER, Secretary.

BIG SANDY-ELKHORN COAL OPERATORS ASSOCIATION,
HARRY LaVIERA, President,
H. S. HOMAN, Secretary.

HAZARD COAL OPERATORS' ASSOCIATION,
GEO. P. FITZ, President,
A. E. SILCOTT, Secretary.

NORTHERN WEST VIRGINIA COAL ASSOCIATION,

CHARLES DORRANCE, President,
T. E. JOHNSON, Treasurer.

Attest:

WALTER L. ROBISON, Chairman,
Appalachian Conference.
THOMAS KENNEDY,
Secretary.
DAVID J. McDONALD,
Assistant Secretary.

4721 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 30-139.

Contract Between the Coal Producers' Association of Illinois and Progressive Mine Workers of America, District 1.

Contract made and entered into this seventeenth day of May, A. D. 1939, by and between District 1, Progressive Mine Workers of America, Party of the First Part, and the Coal Producers Assocation of Illinois, Party of the Second part;

* * * *

Definition of Seven-Hour Day for Miners.

21. The scale of mining prices in this contract is based upon a seven-hour working day and it is definitely understood that this shall mean seven hours work at the face, exclusive of noon-time, five days a week, or thirty-five hours in the week. The Operator has the right to six days per week plant operation, if he desires, and no local ruling shall in any way affect this section, or impose conditions affecting the same.

Definition of Seven-Hour Day for Day Labor.

22. All classes of day labor are to work full seven hours and going to and coming from the respective working places is to be done on their own time. All company men shall perform whatever day labor the foreman may direct. A seven-hour day means seven hours' work at the usual working places, exclusive of noon-time, for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from same at night. The hours per day and hours per week shall be the same for day labor as set forth in Section 21, excepting those employees specifically exempted in Section 23.

* * * *

End of Shaft Agreement.

Strip Mine Agreement.

* * * *

Definition of Seven-Hour Day for Day Labor.

Clause 22 of Shaft contract to apply.

* * * *

End of Strip Mine Agreement.

This contract becomes effective April 1st, 1939, and expires March 31, 1941.

For the Progressive Mine Workers of America, District 1.

DAVE REED,
President.
EARL EVANS,
Secretary-Treasurer.
JOHN STANLEY,
Chairman, Scale Committee.

For the Coal Producers Association of Illinois.

W. C. GILL,
President.
GLENN A. SHAFER,
Secretary-Treasurer.
B. H. FIRTH,
Chairman, Scale Committee.

This contract signed by the above this 18th day of May, 1939.

4723 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 27.

Deposition of L. C. Gunter of Knoxville, Tennessee.

Direct Interrogatories and Answers.

1. State your name, present address and occupation.

Ans. to Q. 1. My name is L. C. Gunter, 1507 Hamilton Bank Building, Knoxville, Tennessee, president of Southern Appalachian Coal Operators Association.

2. State when, where and in what capacity you first became connected with the mining or production of coal.

Ans. to Q. 2. I first became connected with the mining of coal in 1912 in Bell County Kentucky as principal owner of a coal mine and later becoming the owner of three additional mines in the same county.

3. (a) Have you ever been engaged in or connected with the mining or production of ore? (b) If so, state when, were and in what capacity you were so connected and the kind of ore produced.

Ans. to Q. 3. (a) No. (b) None.

4. Summarize your experience from the time you first became connected with the production of coal or ore down to and including the present time, giving the various capacities in which you have been employed, the various mining operations, and the locations thereof, with which you have been connected.

Ans. to Q. 4. I became president and half owner in the Climax Coal Company in Bell County Kentucky in 1912. Later I acquired three other adjoining mines, the Atlas Coal Company, the Crystal Coal Co. and the Pinnacle Coal Company, all of which were consolidated under the name of the Stoney Fork Collieries. I operated these properties until about 1924, at which time I sold them. During these years I was engaged in construction business and after selling the mines I continued in the construction business until 1933, in which year I became secretary and later became president of the Southern Appalachian Coal Operators Association. For four years, 1920 to 1924, I was also president of the same association while operating the coal mines.

5. Summarize your connection with any bargaining or negotiating entity, or arbitration or government commissions, or other similar bodies, relating to the negotiating or making of collective bargaining agreements with United Mine Workers of America or other labor organizations, giving this information chronologically, and giving the nature and general results of such bargaining, negotiation, arbitration, or other similar activity.

Ans. to Q. 5. My first experience in collective bargaining with the United Mine Workers was in the year 1917, at which time we made a contract with the United Mine Workers covering the mines in the Southern Appalachian Coal operation territory. Later, to-wit in the year 1933, when I became secretary of the Southern Appalachian Coal Operators Association we organized jointly with the United Mine Workers a Board of Arbitration for the settle-

ment of disputes in and about the mine which has functioned continuously since that year. In the year 1937 I was appointed a member of the Federal Labor Board, which was provided for in the Coal Conservation Act of 1936. This office, which was in the Labor Department in Washington, lasted for about seven months, at which time the Supreme Court declared the labor feature of the Coal Conservation Act unconstitutional. Since 1933 I have attended all of the joint wage conferences between the United Mine Workers and the coal operators of the Appalachian Wage Conference as a member of the Scale Committee. During the last four years I have been on the negotiating committee representing the High Volatile Coal Districts of the South and have just concluded the recent wage agreement with the United Mine Workers for the Southern Wage Conference.

6. (a) Do you know whether or not it has been the general custom and practice in the coal industry within your experience and knowledge to compute the pay of underground employees on the basis of all time spent from the time such employees leave the mouth or portal of the mine at the beginning of the shift until they arrive at the mouth or portal of the mine at the end of the shift or whether the general custom and practice has been to pay such employees only for the time actually spent at the usual working place.

(b) To state the question in another way: Has it been the general custom and practice in such industry to pay underground employees for time spent in traveling from the mouth or portal of the mine to their working places in the mine and in returning from such working places to the mouth or portal of the mine?

(c) How long has such custom and practice been followed and state whether it is now being followed?

(d) Within range of your knowledge and experience, state whether such custom and practice has been practically universally followed.

Ans. to Q. 6. (a) All of the wage agreements in the negotiation of which I have participated or of which I have any knowledge provide that in coal mining the pay period for the coal mine employees is made on what is known as face to face method; that is that he is paid from the time at which he arrives at his work until he leaves the working place. The travel time to, and from the work is his own, and is not paid for by the employer. I do not know of any coal company anywhere which pays on a portal to portal basis or on any other method except that above described.

(b) No, the employee is never paid in the coal mine agreements for his travel time from the portal to the working place, nor returning from his working place to the portal.

(c) So far as I know this method of payment for working time has always prevailed in the coal industry, and is now in effect as is evidenced in the recent wage conference just concluded in Washington, D. C.

(d) Yes, this practice has been followed universally in the industry.

7. (a) State whether or not the contracts in the mining industry of which you have had knowldege or in the negotiation of which you have participated have included a definition of the day's work which excludes the time spent by the underground employees in traveling to and from their usual working places.

(b) Give the date of the first or earliest contract of which you have knowledge which contains such definition as that referred to in 7(a).

(c) If possible, attach to your deposition a copy of each contract within your knowledge which contains a definition similar to that mentioned in 7(a). If you cannot attach copies of all such contracts, then give the date of each contract, the names of the contracting parties and quote the definition referred to in 7(a) above contained therein, of which you have knowledge.

Ans. to Q. 7. (a) Yes, all contracts make specific provision covering this subject.

(b) The first contract of which I have knowledge was executed in the year 1917.

(c) The first contract of which I have knowledge was in 1917, made between the United Mine Workers and Coal operators. The next was in 1933, then in 1934, then 1935, then 1937, then 1939 and in 1941. I do not have copies of all these contracts. I quote herewith a clause which is included in all of them: "Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours of work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis, except in cases of accident which temporarily necessitate longer hours for those mine workers required on account thereof; and also excepting that number of mine workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine." I also attach a copy of the last contract made between the United Mine Workers of America and the Southern Coal Operators Conference under date of July 5, 1941, in which a similar provision is included.

8. State whether or not, in the industry with which you are familiar, it has been the usual custom and practice, both before and since contracts have been made, for underground employees before actually reaching their places of work, while going to or returning therefrom, to secure carbide, electric lamps, wedges or other light tools and equipment without having the time spent in obtaining these articles included as a part of the day's work.

Ans. to Q. 8. It has always been the custom for the employees of the mine to provide themselves with electric lamps, carbide and other small tools or accessories needed by them before entering the mine or after coming out. This procurement of supplies being done on their own time.

9. (a) What has been the general custom and practice, both before and since contracts between operators and employees were made, with respect to the underground employees, on entering the mine, depositing or taking up check numbers or to otherwise use some system of checking the men in and out of the mine, so as to enable the places of absentees to be filled and so as to know who goes in and comes out of the mine?

(c) Has it been the general custom and practice to inclued these matters as a part of the day's work?

Ans. to Q. 9. (a) It is customary at all mines for all employees to take up check numbers, cards or similar devices to show their presence in the mine, and to deposit them at a convenient place on leaving the mine.

(c) No, this work being of such a minor character, has always been done by the miner or other employee on his own time, and without being included in his pay period.

10. (a) State whether or not the custom and practice of paying underground mine employees on the basis of

time spent only at the working place (commonly called the "face to face" basis) been in dispute between employers and employees in the negotiations of contracts with which you are familiar.

(b) If you have answered the immediately preceding question in the affirmative, state when such dispute arose, how it arose, how it was disposed of. Isn't it a fact that such custom and practice has always been recognized by all parties and has never been in dispute?

(c) Have the employees or their representatives on negotiations in which you participated or of which you have knowledge contended for any change in such custom and practice?

Ans. to Q. 10. (a) The matters of payment to employees on the face to face method has always been the subject of agreement at each of the wage conferences, but has never been the subject of any controversy or argument, as the custom is accepted by both sides as the prevailing practice in the industry.

(b) No question with reference to this method of payment has ever been raised in the industry. The matter was brought up for conference between representatives of the Coal Operators and representatives of the United Mine Workers in a conference with representatives of the Wage and Hour Board. This Board had made a ruling that the time of employees in a gold mine in the west should be paid on a potral to portal basis, and an effort was being made to acquire the same method of calculating time for the coal industry. At this conference which was held in the city of Philadelphia in the year 1940, both Coal Operators and coal miners representatives stood together for the metohd of payment as practiced in the industry, that is on a face to face method. As a result of their combined

effort the Wage & Hour Board ruled that the practice now in effect in the coal mine industry should continue.

(c) No.

Cross Interrogatories and Answers.

1. When did plaintiffs send you a copy of the questions asked upon direct examination?

Ans. to Q. 1. About four weeks ago during my prolonged absence and I do not have the date with me at the present time.

2. At the present time how many hours at the face are included in a daily shift for underground coal miners in the mines with which you are familiar?

Ans. to Q. 2. Seven hours constitutes the day's work.

3. Are not hours at the face in a daily shift limited to 7 for underground coal miners at the mines with which you are familiar?

Ans. to Q. 3. Yes, as applied to coal loaders.

4. Is not the prevailing number of hours at the face for underground coal miners limited to 35 hours per week?

Ans. to Q. 4. Yes, as to coal loaders.

5. Are not 7 hours per day and 35 hours per week at the face for underground coal miners prevailing in the Alabama coal mines?

Ans. to Q. 5. Yes, as far as I know these hours prevail for the coal loader.

6. If the answer to the question immediately preceding is yes, is that not true with respect to captive coal mines as well as commercial coal mines?

Ans. to Q. 6. I am not familiar with the contracts made for captive coal mines which often operate under different terms from that of a commercial mine.

7. Were you present at any negotiations between representatives of coal mine operators and representatives of the United Mine Workers of America, during which negotiations or discussions 7 hour per day and 35 hours per week at the face for underground coal miners was one of the points at issue between the coal mine operators and the United Mine Workers?

Ans. to Q. 7. Yes.

8. If the answer to the question immediately preceding is yes, when were you present at such discussions or negotiations?

Where were they carried on?

On whose behalf were you present?

And were any representatives of Republic Steel Corporation, Tennessee Coal, Iron and Railroad Company, or Sloss-Sheffield Steel and Iron Company parties to or present at such negotiations and discussions?

Ans. to Q. 8. I was present at these negotiations as a representative of the Southern Appalachian Coal Operators Association, and these discussions were carried on in the city of Washington. The year was either 1935 or 1936. I do not recall any representatives of any of the steel companies named as being present at these negotiations.

9. At the discussions and negotiations referred to in the two previous questions, did not the coal mine operators urge in opposition to 7 hours per day and 35 hours per week at the face for underground coal miners that it would be impossible for them to operate their mines under

such circumstances, and that their daily cycle of operations in the mines would be interfered with and disrupted, in consequence of which production of coal would decrease?

Ans. to Q. 9. At these conferences the operators did oppose the seven hour day and 35 hour week on the ground that it would be necessary under that method to reconstruct their methods of operation, and to revise procedure in order to maintain their production, and that such method would probably require a larger number of day men.

10. During the negotiations at which you were present or in which you participated, and at any time before a contract was entered into or an agreement reached between the coal mine operators and the United Mine Workers of America, did you or did the organizations you represented, oppose the demands of the United Mine Workers for 7 hours per day and 35 hours per week at the face for underground coal miners?

Ans. to Q. 10. Our organization opposed the 7 hour day and 35 hour week before the contract was executed.

11. If the answer to the question immediately preceding is yes, on what grounds did you or did the organizations you represent oppose the demands of the United Mine Workers of America for 7 hours per day and 35 hours per week at the face for underground coal miners?

Ans. to Q. 11. It was opposed on the ground that it would materially increase the cost of production, would require the purchase of additional machinery, and the employment of additional day men if the production was to be maintained.

12. What is (a) the minimum, (b) the maximum, and (c) the average time required by underground coal miners in each of the mines with whose operations you are

familiar, to reach the face from the portal and return to the portal from the face?

Ans. to Q. 12. There are mines in this territory in which the miners can reach the face of the coal from the portal in five to ten minutes, while in others it would require as much as an hour. There is no way of making an average as the conditions at each mine control the length of time necessary.

13. Is it not true that in many underground metal mines in the United States part or all of the time spent by underground metal miners between the collar or portal of the mine and the face was considered time worked before May 1, 1941?

Ans. to Q. 13. I am not familiar with the practices in the ore mines.

14. Please state the name and location of each of the mines to which you refer in answer to question 12 and state to which of each of said mines the minimum, maximum, and average time which you give are related.

Ans. to Q. 14. The mines to which I refer are all members of the Southern Appalachian Coal Operators Association and located in five counties in Tennessee and four counties in Kentucky, but I do not have their names available at the present.

Attached to the deposition of L. C. Gunter as an exhibit is a copy of "Southern Wage Agreement" dated Washington, D. C., July 5, 1941, executed between the Operators' Association of Williamson Field and eleven other coal mining fields located in Kentucky, West Virginia, Virginia and other states, and the International Union, United Mine Workers of America, and Districts 17, 19, 28, and 30 thereof, consisting of seventeen typewritten pages, covering hours, wages, and conditions of employment in the coal mines in the territory stated.

Among other provisions are the following.

Maximum Hours and Working Time.

Seven hours of labor shall constitute a day's work. The seven-hour day means seven hours' work in the mines at the uqual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis; except in cases of accident which temporarily necessitates longer hours for those Mine Workers required on account thereof; and also excepting that number of Mine Workers in each mine whose daily work includes the handling of man-trips and those who are required to remain on duty while men are entering and leaving the mine.

Overtime: Work by Mine Workers paid by hour or day in excess of seven (7) hours in one day or thirty-five (35) hours in any one week shall be paid for at the rate of time and one-half with the following exceptions:

Employees engaged at power houses, substantions, and pumps operating continuously for twenty-four (24) hours daily are especially exempted from the seven (7) hour day and the time and one-half provisions. Special exemptions for individual employees other than those named above when twenty-four (24) hours continuous operation daily is required are subject to arrangement between the mine management and District officers without time and one-half for overtime. Employees so especially exempted are limited to eight (8) hours per day and forty (40) hours per week and time and one-half for time worked in excess thereof.

The seven (7) hour day, five (5) day week (35 hours per week) as provided in this Agreement, shall prevail.

The following classes of Mine Workers are excepted from the foregoing provisions as to the maximum hours of work.

All Mine Workers engaged in the transportation of men and coal shall work the additional time necessary to handle man-trips and all coal in transit and shall be paid the regular hourly rate for the first seven (7) hours and time and one-half for all overtime.

Outside employees engaged in the dumping, handling and preparation of coal, and the manufacture of coke, shall work the additional time necessary, not to exceed thirty (30) minutes, to dump and prepare the coal delivered to the tipple each shift, and complete the usual duties incidental to the operation of coke ovens, and shall be paid the regular hourly rates for the first seven (7) hours and time and one-half for overtime not to exceed the thirty (30) minutes hereinbefore stated.

When day men go into the mine in the morning, they shall be entitled to two hours' pay whether or not the mine works the full two hours, but, after the first two hours, the men shall be paid for every hour thereafter by the hour, for each hour's work or fractional part thereof. If for any reason the regular routine work can not be furnished inside day men, the employer may furnish other than the regular work.

Drivers shall take their mules to and from stables, and the time required in so doing shall not include any part of the day's labor, their work beginning when they reach the change at which they receive empty cars, but in no case shall the driver's time be docked while he is waiting for such cars at the point named. The method at present existing covering the harnessing and unharnessing of

mules shall be continued throughout the life of this Agreement.

Motormen and trip riders shall be at the passway where they receive the cars at starting time. The time required to take motors to the passway at starting time and departing from the same at quitting time shall not be regarded as a part of the day's labor, their time beginning when they reach the change or parting at which they receive cars, but in no case shall their time be docked while waiting for cars at the point named."

Also provisions providing the scale of minimum wages, both on tonnage basis and the hourly rates for a seven hour day.

4736 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 28.

Deposition of Francis Keegan, of Pittsburg, Kansas.

Direct Interrogatories and Answers.

Q. 1: State your name, present address and occupation.

A. 1: Francis J. Keegan, general superintendent, Western Coal & Mining Company, Franklin, Kansas. Home address, 205 West Ninth Street, Pittsburg, Kansas.

Q. 2: State when, where and in what capacity you first became connected with the mining or production of coal.

A. 2: I am 68 years of age. I began mining coal in Scotland at the age of 12. Worked in various capacities in mines in Maryland, West Virginia, Kansas, Missouri, Arkansas and Illinois.

Q. 3 (a): Have you ever been engaged in or connected with the mining or production of ore?

A. 3 (a): I have had no experience in ore mines.

Q. 3 (b): If so, state when, where and in what capacity you were so connected and the kind of ore produced.

A. 3 (b): (No answer).

Q. 4: Summarise your experience from the time you first became connected with the production of coal or ore down to and including the present time, giving the various capacities in which you have been employed, the various mining operations, and the locations thereof, with which you have been connected.

A. 4: Mine foreman from 1907 to 1913; State Mine Inspector of the State of Kansas from 1913 to 1915, inclusive; mine foreman and field superintendent from 1915 to 1919; local superintendent from 1919 to 1922 and general superintendent from 1922 to date; all deep coal mining located in Crawford County, Kansas, some in Missouri, Oklahoma, Arkansas and Illinois.

Q. 5: Summarize your connection with any bargaining or negotiating entity, or arbitration or government commissions, or other similar bodies, relating to the negotiating or making of collective bargaining agreements with United Mine Workers of America or other labor organizations, giving this information chronologically, and giving the nature and general results of such bargaining, negotiation, arbitration, or other similar activity.

A. 5: I represented our company as a member of the Southwestern Interstate Coal Operators Association in the negotiation of contracts with the officers and members of the United Mine Workers of America covering rates and conditions of employment during the past 20 years. We have always come to an agreement with the miners, sometimes after weeks and months of argument, but I do

not recall ever having failed to reach an agreement eventually.

Q. 6 (a): Do you know whether or not it has been the general custom and practice in the coal industry within your experience and knowledge to compute the pay of underground employees on the basis of all time spent from the time such employees leave the mouth or portal of the mine at the beginning of the shift until they arrive at the mouth or portal of the mine at the end of the shift or whether the general custom and practice has been to pay such employees only for the time actually spent at the usual working place?

A. 6 (a): All contracts made with miners during all the years of my experience have contained printed clauses providing that time spent by the employees traveling from portal to working place and returning to portal was never computed or paid for as part of the day's work. It has been the general custom during all my years of experience in mining to pay the employees only for the time actually spent at the usual working place. At no time has it been the custom to pay for the time it took a miner or day man to reach his working place or return therefrom.

Q. 6 (b): To state the question in another way: Has it been the general custom and practice in such industry to pay underground employees for time spent in traveling from the mouth or portal of the mine to their working places in the mine and in returning from such working places to the mouth or portal of the mine?

A. 6 (b): It has never been and is not now the custom to pay the employee for time spent in traveling from the mouth or portal of the mine to his working place in the mine and in returning from such working place to the mouth or portal of the mine.

Q. 6 (c): How long has such custom and practice been followed and state whether it is now being followed?

A. 6 (c): This custom of not paying the employees for time spent in traveling from the mouth of the mine to his working place and returning has been followed as long as I can remember. It is still being followed today.

Q. 6 (d): Within range of your knowledge and experience, state whether such custom and practice has been practically universally followed:

A. 6 (d): This custom of not paying the employee for time spent in traveling from the mouth of the mine to his working place and returning has been universally followed.

Q. 7 (a): State whether or not the contracts in the mining industry of which you have had knowledge or in the negotiation of which you have participated have included a definition of the day's work which excludes the time spent by the underground employees in traveling to and from their usual working places.

A. 7 (a): The contracts in which I have participated have always included such a definition excluding the time spent by underground employees in traveling to and from their usual working places.

Q. 7 (b): Give the date of the first or earliest contract of which you have knowledge which contains such a definition as that referred to in 7 (a).

A. 7 (b): The contract for 1904.

Q. 7 (c): If possible, attach to your deposition a copy of each contract within your knowledge which contains a definition similar to that mentioned in 7 (a). If you cannot attach copies of all such contracts, then give the date of each contract, the names of the contracting parties

and quote the definition referred to in 7 (a) above contained therein, of which you have knowledge.

A. 7 (c): I am unable to attach a copy of each contract within my knowledge containing a definition similar to that mentioned in 7 (a). The contract between the Southwestern Interstate Coal Operators Association and The United Mine Workers of America for the period from September 1, 1904 to March 31, 1906, contains this definition on Page 3: "All classes of day labor are to work full eight hours, and the going to and coming from the respective working places is to be done on the day hands' own time. All company men shall perform whatever day labor the foreman may direct. An eight hour day means eight hours' work in the mines at the usual working places, exclusive of noon time—which shall be one-half hour—for all classes of inside day labor." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America adopted June 16, 1906, for Period ending March 31, 1908, contains the following definition: (Page 3) Section 1. "All classes of day labor are to work full eight hours, and the going to and coming from the respective working places is to be done on the day hands' own time. All company men shall perform whatever day labor the foreman may direct. An eight-hour day means eight hours' work in the mines at the usual working places, exclusive of noon time—which shall be one-half hour—for all classes of inside labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and The United Mine Workers of America adopted September 19, 1910, for the period ending March 31, 1912, contains the following definition: (Page 5) "The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight hour

day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and The United Mine Workers of America adopted August 29, 1914, for period ending July 31, 1916, on page 4, contains the following definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Coal Operators Association and the United Mine Workers of America for the period ending July 31, 1918, on page 5, contains this definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America for the period beginning April 1, 1920 and ending March 31, 1922, on page 5, contains this definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on

the employe's own time. All Company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and The United Mine Workers of America for the period beginning April 1, 1923 and ending March 31, 1924, on page 31, contains this definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working place, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America for the period beginning April 1, 1924, and ending March 31, 1927, on page 6, contains the following definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America, for the period beginning September 1, 1928, and ending April 1st,

1931, on page 9, contains this definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America for the period beginning April 1, 1931, and ending April 1, 1935, on page 10, contains the following definition: "For all classes of labor eight hours shall constitute a day's work. The going to and coming from the respective working places is to be done on the employe's own time. All company men shall perform whatever labor the foreman may direct. An eight-hour day means eight hours' work at the usual working places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America for the period beginning October 1, 1935, and ending April 1, 1937, on page 7, contains the following definition: "Article 1. For all classes of labor seven hours shall constitute a day's work with a maximum of thirty-five hours per week, except in cases of emergency or accident which temporarily necessitates longer hours for those mine workers required on account thereof, or as otherwise provided. The going to and coming from respective working places is to be done on the employee's own time. All company men shall perform whatever labor the foreman may direct. A seven-hour day means seven hours' work at the usual working

places, exclusive of noon time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and The United Mine Workers of America for the period beginning April 1, 1937, and ending March 31, 1939, contains the following definition, on page 7, thereof: "Article 1. For all classes of labor, except as otherwise provided, seven hours shall constitute a day's work and thirty-five hours a week. Time and one-half to be paid for all over seven hours worked in any one day or thirty-five hours in any one week. The going to and coming from the respective working places is to be done on the employee's own time. All day men shall perform whatever labor the foreman may direct. A seven-hour day means seven hours' work at the usual working places, exclusive of noon-time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night." The contract between the Southwestern Interstate Coal Operators Association and the United Mine Workers of America for the period beginning April 1, 1939, and ending March 31, 1941, I am attaching to my deposition.

Q. 8: State whether or not, in the industry with which you are familiar, it has been the usual custom and practice, both before and since contracts have been made, for underground employees before actually reaching their places of work, while going to or returning therefrom, to secure carbide, electric lamps, wedges or other light tools and equipment without having the time spent in obtaining these articles included as a part of the day's work.

A. 8: The miner's supplies in Kansas, with the exception of powder, which is delivered by the company to

the miner's working place, are purchased by the miner from local merchants away from the mine.

Q. 9 (a): What has been the general custom and practice, both before and since contracts between operators and employees were made, with respect to the underground employees, on entering the mine, depositing or taking up check numbers or to otherwise use some system of checking the men in and out of the mine, so as to enable the places of absentees to be filled and so as to know who goes in and comes out of the mine?

A. 9 (a): This practice has never prevailed in Kansas, Missouri, Arkansas or Oklahoma mines, but it does prevail in the Illinois mines where I have had some experience.

Q. 9 (c): Has it been the general custom and practice to include these matters as a part of the day's work?

A. 9 (c): No.

Q. 10 (a): State whether or not the custom and practice of paying underground mine employees on the basis of time spent only at the working place (commonly called the "face to face" basis) has been in dispute between employers and employees in the negotiations of contracts with which you are familiar.

A. 10 (a): There has never been any dispute over that provision of the contract at any time over all these years. It has been mutually agreeable to miner and operator alike.

Q. 10 (b): If you have answered the immediately preceding question in the affirmative, state when such dispute arose, how it arose, how it was disposed of. Isn't it a fact that such custom and practice has always been recognized by all parties and has never been in dispute?

A. 10 (b): It is a fact that such custom and practice has always been recognized by all parties and has never been in dispute.

Q. 10 (c): Have the employees or their representatives on negotiations in which you participated or of which you have knowledge contended for any change in such custom and practice?

A. 10 (c): There has never been any contention for a change in such custom and practice made by the representatives of either the miners or employees.

Cross Interrogatories and Answers.

Q. 1: When did plaintiffs send you a copy of the questions asked upon direct examination?

A. 1: Under date of June 24, 1941, I received a set of seven questions which I answered to the best of my ability under date of June 28, 1941.

Q. 2: At the present time how many hours at the face are included in a daily shift for underground coal miners in the mines with which you are familiar?

A. 2: Seven hours constitutes a day's work under the terms of our contract.

Q. 3: Are not hours at the face in a daily shift limited to seven for underground coal miners at the mines with which you are familiar?

A. 3: Yes.

Q. 4: Is not the prevailing number of hours at the face for underground coal miners limited to 35 hours per week?

A. 4: Yes, at the present time.

Q. 5: Are not seven hours per day and 35 hours per week at the face for underground coal miners prevailing in the Alabama coal mines?

A. 5: I have no knowledge of the provisions covering the operations of the Alabama mines as to the number of hours that constitutes a day's work.

Q. 6: If the answer to the question immediately preceding is yes, is that not true with respect to captive coal mines as well as commercial coal mines?

A. 6: (No answer).

Q. 7: Were you present at any negotiations between representatives of coal mine operators and representatives of the United Mine Workers of America, during which negotiations or discussions seven hours per day and 35 hours per week at the face for underground coal miners was one of the points at issue between the coal mine operators and the United Mine Workers?

A. 7: Yes.

Q. 8: If the answer to the question immediately preceding is yes, when were you present at such discussions or negotiations. A. November 4, 1935. Q. Where were they carried on? A. Pittsburg, Kansas. Q. On whose behalf were you present? A. Western Coal and Mining Company, a member of the Southwestern Interstate Coal Operators Association. Q. And were any representatives of Republic Steel Corporation, Tennessee Coal, Iron and Railroad Company, or Sloss-Sheffield Steel and Iron Company parties to or present at such negotiations and discussions? A. No, none of those were there.

Q. 9: At the discussions and negotiations referred to in the two previous questions, did not the coal mine operators urge in opposition to 7 hours per day and 35 hours per week at the face for underground coal miners that it would be impossible for them to operate their mines under such circumstances, and that their daily cycle of operations in the mines would be interfered with and disrupted, in consequence of which production of coal would decrease?

A. 9: They did to some extent but it was mainly on the increased cost of production that the 7 hour per day would bring about.

Q. 10: During the negotiations at which you were present or in which you participated, and at any time before a contract was entered into or an agreement reached between the coal mine operators and the United Mine Workers of American, did you or did the organizations you represented, oppose the demands of the United Mine Workers for 7 hours per day and 35 hours per week at the face for underground coal miners?

A. 10: Yes.

Q. 11: If the answer to the question immediately preceding is yes, on what grounds did you or did the organizations you represent oppose the demands of the United Mine Workers of America for 7 hours per day and 35 hours per week at the face for underground coal miners?

A. 11: Principally on the ground that the adoption of a 7 hour day would increase the cost of production.

Q. 12: What is (a) the minimum, (b) the maximum, and (c) the average time required by underground coal miners in each of the mines with whose operations you are familiar, to reach the face from the portal and return to the portal from the face?

A. 12 (a): 15 minutes minimum, (b) 25 minutes maximum and (c) 20 minutes average.

Q. 13: Please state the name and location of each of the mines to which you refer in answer to question 12 and state to which of each of said mines the minimum, maximum and average time which you give are related?

A. 13: Mines #22 and #24 of the Western Coal & Mining Company. Mine #22 is located one mile north of Arma, Kansas; mine #24 is located two and one-half miles southeast of Franklin, Crawford County, Kansas. The minimum, maximum and average apply to each mine alike.

Q. 14: Is it not true that in many underground metal mines in the United States part or all of the time spent by underground metal miners between the collar or portal of the mine and the face was considered time worked before May 1, 1941?

A. 14: I have no knowledge of the conditions prevailing in metal mines in reference to time worked or time paid for.

Attached to the foregoing deposition of Francis Keegan, as an exhibit, is a printed copy, consisting of cover and 106 printed pages, of "Interstate and District Contract for Shaft Mines Holding Membership in the S. I. C. O. Association, District Number 14, between the U. M. W. of A., and S. I. C. O. A., adopted at Pittsburg, Kansas, May 18, 1939, for a period beginning April 1, 1939, and ending March 31, 1941," and signed, "In Behalf of the Southwestern Interstate Coal Operators Association: George K. Mackie, Jr., President; Bernard Harrigan, Commissioner; In Behalf of the United Mine Workers of America, Henry Allai, President District 14, Joseph E. Hromek, Secretary-Treasurer District 14, Ernest Rendaci, Joe Scepansky, Proctor K. Hinkle, Louis Minor, Ernest Roscher, Scale Committee, John L. Lewis, International President, U. M. W. of A., By Henry Allai," which contract covers hours, wages, and conditions of employment in the coal mines in Cherokee and Crawford Counties, Kansas, and Barton and La-Fayette Counties, Missouri.

Among other provisions are the following:

"Seven-Hour Day.

Section III.

"Article 1. For all classes of labor, except as otherwise provided, seven hours shall constitute a day's work and

thirty-five hours a week. Time and one-half to be paid for all over seven hours worked in any one day or thirty-five hours in any one week.

The going to and coming from the respective working places is to be done on the employee's own time. All day men shall perform whatever labor the foreman may direct. A Seven-hour day means seven hours' work at the usual working places, exclusive of noon-time, which shall be one-half hour for all classes of day labor. This shall be exclusive of the time required in reaching such working places in the morning and departing from the same at night. The operator may refuse to allow any day man to work on any day on which he fails to be at his working place at the starting time."

* * * *

"Drivers and Motormen.

Section X.

"Article 1. Motormen and drivers shall take their motors and mules to and from the stables, and the time required in so doing shall not include any part of the day's labor. Their time beginning when they reach the change at which they receive empty cars—that is the parting motormen and drivers at the shaft bottom and the inside motormen and drivers at the parting—and ending at the same place; but in no case shall a motorman's and driver's time be docked while he is waiting for such cars at the points named. The inside motormen and drivers, at their option, may either walk to and from their parting or take with them, without compensation, either loaded or empty cars to enable them to ride. This provision, however, shall not prevent the inside motormen and drivers from bringing to and taking from the bottom regular trips,

if so directed by the mine foreman; provided such work is done within the seven hours."

* * * *

"Harnessing Mules.

"Article 32. * * * When mules are kept in the mine, if the mules are harnessed by the company the driver must be at the mine bottom, or the parting where he commences work, ready to begin at starting time."

* * * *

Machine Crews.

Section 27.

"(a) It shall be the duty of the machine crews to assemble and take into their working place such tools and materials as are necessary on their own time and begin running their machine promptly at starting time. Also it shall be their duty to uncouple and turn up the face track, operate the machine and properly undermine the coal at any time either day or night or on idle days at the operator's option.

* * * *

"(c) They shall also properly oil and give due diligence and attention to the proper care of the machine and its equipment. They shall bring out at quitting time all dull bits, used chains, broken tools, and at all times carry not less than three (3) props in their trick car.

"(d) They shall work full seven hours at the machine exclusive of lunch time and any member leaving his place

of work before quitting time shall be subject to discharge, unless properly reported on the machine sheet.

"(e) It shall be the duty of the machine runner at the end of the shift to correctly report to his foreman or other person designated by the management the correct location of, and condition of his machine; hours worked, feet or rails cut; chains used; cables changed; broken or dangerous roof encountered; number of props set and names of men injured, if any. Failure to do so shall be punishable by the forfeiture of his position as runner."

Also provisions providing the scale of minimum wages, both on tonnage basis and the hourly rates, for a seven-hour day.

4752 FOR IDENTIFICATION PLAINTIFFS' EXHIBITS 26 AND 29.

Exhibit 26 is the Deposition of W. J. Jenkins, of St. Louis, Missouri, with exhibits attached, and Exhibit 29 is the Deposition of D. C. Kennedy of Charleston, West Virginia, with an exhibit attached.

These depositions in reference to customs and contracts in the coal mines of Pennsylvania, Ohio, Michigan, West Virginia, Virginia, Tennessee, Kentucky, Illinois, Missouri, Kansas, Arkansas, Oklahoma, and are substantially the same as customs and contracts testified to in the deposition of L. C. Gunter, (Plaintiffs' Exhibit 27), and the deposition of Francis Keegan (Plaintiffs' Exhibit 28).

FOR IDENTIFICATION T. C. I. EXHIBIT No. 40.

Report Showing Comparison Lost-Time Accidents (Including Fatalities) Coal Mines and Iron Ore Mines (Including No. 5 Limestone Mine) Tennessee Coal, Iron & Railroad Company—Years 1938, 1939 & 1940.

	Iron Ore Mines		Coal Mines		
Period	Number Lost Time Acc.	Freq.* Rate	Number Lost Time Acc.	Freq. Rate	Percent Increase Coal Mines Over Ore Mines
1938	39	15.96	89	16.74	5% Inc.—1-1/20 Times as Large
1939	40	11.08	123	21.17	91% Inc.—1-9/10 Times as Large
1940	52	11.91	198	24.97	110% Inc.—2-1/10 Times as Large
Total 3 Years	31	12.57	410	21.52	71% Inc.—1-7/10 Times as Large

Period	Man-Hours Worked	
1938	2,444,002	5,317,836
1939	3,609,062	5,809,220
1940	4,366,969	7,928,344
Total 3 Years	10,420,033	19,055,400

(These figures are for Ishkooda, Muscoda, Wenonah, and No. 5 Limestone—*Underground* only.)

(*) Freq. Rate—Number of accidents per million man-hours worked.

Safety & Casualty Bureau
7-20-41.

4754 FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-A to 52-G.

This exhibit consists of:

No. 52-A: Tabulated statement entitled "Report showing comparison Lost-Time Accidents (Including Fatalities) Coal Mines and Iron Ore Mines—U. S. Bureau of Mines, 1937, 1938 & 1939;"

No. 52-B: Mimeographed manuscript entitled, "United States Department of the Interior, Bureau of Mines, R. R. Sayers, Director. Statistical and Economic Surveys Mineral Production and Economics Division, August 2, 1940. H. S. S. No. 274. Employment and Accidents at Iron-Ore Mines in the United States, 1939;"

No. 52-C: Mimeographed manuscript entitled, "United States Department of the Interior, Bureau of Mines, R. R. Sayers, Director. Statistical and Economic Surveys Mineral Production and Economics Division. For immediate release. H. S. S. No. 279. Employment and Accidents at Coal Mines in the United States, 1938. (Final Figures);"

No. 52-D: Mimeographed manuscript entitled, "United States Department of the Interior, Bureau of Mines, R. R. Sayers, Director. Statistical and Economic Surveys Mineral Production and Economics Division. For immediate Release. No. C. M. F. 119. Coal Mine Fatalities in May, 1941;"

No. 52-E: Printed pamphlet entitled, "United States Department of the Interior Bureau of Mines. Metal-Mine Accidents in the United States; 1937. Bulletin 428;"

No. 52-F: Printed pamphlet entitled, "United States Department of the Interior, Bureau of Mines, Coal-Mine Accidents in the United States: 1937. Bulletin 430;"

No. 52-G: Printed pamphlet entitled, "United States Department of the Interior, Bureau of Mines. Metal-Mine Accidents in the United States: 1939. Bulletin 435."

The following statistical tables have been taken from the said publications and are designated for printing in the record:

FOR IDENTIFICATION PLAINTIFFS' EX. #52A.

Case #5232.

Exhibit B.

Report Showing Comparison Lost-Time Accidents (Including Fatalities) Coal Mines and Iron Ore Mines—U. S. Bureau of Mines 1937, 1938 & 1939.

Period	Iron Ore Mines: Number Lost Time Acc.	Iron Ore Mines: Freq.* Rate	Coal Mines: Number Lost Time Acc.	Coal Mines: Freq. Rate	Percent Increase Coal Mines Over Ore Mines
1937	1,181	46.13	49,396	87.42	90% Inc.—1-9/10 times as large.
1938	404	24.37	34,515	82.70	239% Inc.—3-2/5 times as large.
1939	506	24.10	35,645	77.83	223% Inc.—3-1/5 times as large.
Total 3 Years	2,091	33.10	119,556	83.00	151% Inc.—2-1/2 times as large.

Period	Man-Hours Worked	
1937	25,602,017	565,070,730
1938	16,575,015	417,345,108
1939	20,998,807	457,964,957
Total 3 Years	63,175,839	1,440,380,795

(These figures are for all mines in the United States—*Underground only.)*

(*) Freq. Rate—Number of accidents per million man-hours worked.

Safety & Casualty Bureau.
7-19-41.

United States Department of Interior, Bureau of Mines:

Metal Mines: 1937—Bulletin No. 428, page 5.
1938—Bulletin No 435, page 5.
1939—Bulletin No. H. S. S. 274, pages 3 and 5.

Ore Mines: 1937—Bulletin No. 430, page 3.
1938—Bulletin No. H. S. S. 279, page 4.
1939—Bulletin No. C. M. F. 119, page 11.

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FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-B.

Table 1.—Men Employed and Average days of Employment During 1939, by States.

State	Number of Active Operators	Number of Active Mines	Number of Men Employed				Average Days of Employment per Man
			Underground	Open-cut	Surface	Total	
Alabama	44	56	3,508	588	457	4,553	229
Michigan	22	44	4,227	267	1,749	6,243	217
Minnesota	28	65	2,085	3,043	1,142	6,270	217
New York	4	6	457	3	148	608	272
New Jersey & Pa.	5	8	570	199	186	955	295
Ga., Tenn., & Va.	18	19	3	98	...	101	144
Calif., S. Dak., Utah, Wash., & Wyo.	13	13	113	68	60	241	206
Missouri & Wis.	8	8	474	157	167	798	233
Total 1939	142[1]	219[1]	11,437	4,423	3,909	19,769	225
Total 1938	112[1]	184[1]	10,729	3,311	3,966	18,006	197

[1] Excludes an undetermined number of small pits in Alabama and Missouri.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-B.

Table 2.—Man-Days and Man-Hours of Employment During 1939, by States.

State	Man-Days of Employment				Man-Hours of Employment			
	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
Alabama	801,572	114,983	124,673	1,041,228	6,412,567	982,715	997,382	8,392,664
Michigan	932,464	34,665	385,229	1,352,358	7,487,341	277,329	3,084,683	10,849,353
Minnesota	463,731	615,575	280,312	1,359,618	3,709,857	4,924,876	2,235,353	10,870,086
New York	119,534	270	45,501	165,305	956,278	2,160	364,009	1,322,447
New Jersey & Pennsylvania	162,058	68,547	51,386	281,991	1,303,190	548,374	403,891	2,255,455
Georgia, Tenn., & Virginia	15	14,527	.....	14,542	120	119,072	.....	119,192
Calif., S. Dak., Utah, Wash. & Wyo.	24,827	11,652	13,242	49,721	198,616	92,787	105,932	397,335
Missouri & Wisconsin	116,355	27,593	42,016	185,964	930,838	220,740	336,132	1,487,710
Total 1939	2,620,556	887,812	942,359	4,450,727	20,998,807	7,168,053	7,527,382	35,694,242
Total 1938	2,071,746	605,452	878,481	3,555,679	16,575,015	4,921,185	7,019,230	28,515,430

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-B.

Table 3.—Accidents and Accident Rates, With Average Hours of Employment Per Day and Per Year, During 1939, by States.

State	Killed	Injured				Rate per Million Man-Hours		Average Hours of Employment per Man per Day	Average Hours of Employment per Man per Year
		Permanent Total Disability	Permanent Partial Disability	Temporary	Total	Killed	Injured		
Alabama	10	3	13	131	147	1.19	17.52	8.06	1,843
Michigan	3	3	8	154	163	.28	15.02	8.02	1,738
Minnesota	6	..	16	98	114	.55	10.49	7.99	1,734
New York	..	..	2	50	52	..	39.32	8.00	2,175
New Jersey & Pennsylvania	2	..	5	60	65	.89	28.82	8.00	2,362
Georgia, Tenn., & Va.	..	..	..	1	1	..	8.39	8.20	1,180
Calif., S. Dak., Utah, Wash. & Wyo.	1	..	1	26	27	2.52	67.95	7.99	1,649
Missouri & Wisconsin	1	..	..	33	33	.67	22.18	8.00	1,864
Total 1939	23	4	45	553	602	.64	16.87	8.02	1,806
Total 1938	20	2	44	410	456	.70	15.99	8.02	1,584

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FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-B.

Table 4.—Accidents During 1939, by Cause and Type of Disability.

Cause of Accident	Killed	Nonfatal				Grand Total
		Permanent Total Disability	Permanent Partial Disability	Temporary	Total	
Underground:						
1. Fall of rock or ore from roof or wall	11	..	4	116	120	131
2. Rock or ore while loading at working face	..	..	5	31	36	36
3. Hand tools	..	3	6	21	30	30
4. Explosives	1	1	5	11	17	18
5. Haulage	3	..	4	64	68	71
6. Falling down chute, winze, raise, or stope	3	..	1	17	18	21
7. Run of ore from chute or pocket	..	..	..	19	19	19
8. Drilling	..	..	4	17	21	21
9. Electricity	..	..	..	3	3	3

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10. Machinery	..	..	..	31	31	31
11. Mine fires	..	..	..	...	..	..
12. Suffocation from natural gases	..	..	..	..	..	..
13. Inrush of water	..	..	..	..	..	..
14. Stepping on nail	..	..	..	5	5	5
15. Handling materials (other than rock or ore)	..	..	4	56	60	60
16. Other causes	1	..	2	54	56	57
Total Underground	19	4	35	445	484	503
Shaft:						
17. Falling down shaft	..	..	..	1	1	1
18. Objects falling down shaft	..	..	..	1	1	1
19. Breaking of cables	..	..	..	..	..	..
20. Overwinding	..	..	..	..	..	..
21. Skip, cage, or bucket	..	..	..	1	1	1
22. Other causes	..	..	..	..	..	..
Total Shaft	..	..	..	3	3	3

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-B.

Table 4.—Accidents During 1939, by Cause and Type of Disability (Continued).

Cause of Accident	Killed	Nonfatal				Grand Total
		Permanent Total Disability	Permanent Partial Disability	Temporary	Total	
Open-cut:						
1. Falls or slides of rock or ore	..	..	..	4	4	4
2. Explosives	..	..	..	1	1	1
3. Haulage	1	..	2	7	9	10
4. Power shovels	..	..	1	5	6	6
5. Falls of persons	1	..	..	13	13	14
6. Falls of derricks, booms, etc.	..	..	1	..	1	1
7. Run or fall of ore in or from ore bins	..	..	..	..	..	..
8. Machinery	1	..	..	6	6	7
9. Electricity	..	..	..	1	1	1
10. Hand Tools	..	..	2	4	6	6
11. Handling materials	..	..	..	13	13	13
12. Other causes	..	..	1	21	22	22
Total Open-cut	3	..	7	75	82	85

Surface:							
1. Mine cars, mine loccmotives, gravity or aerial trams.....	1	..	..	1	1	2	
2. Railway cars and locomotives.	..	..	..	1	1	1	
3. Run or fall of ore in or from ore bins	..	..	..	..	..	..	
4. Falls of persons	..	..	..	4	4	4	
5. Stepping on nail	..	..	..	..	..	..	
6. Hand Tools	..	..	..	..	..	..	
7. Electricity	..	..	..	..	..	..	
8. Machinery	..	..	2	4	6	6	4885
9. Handling materials	..	..	1	10	11	11	
10. Other causes	..	..	..	9	9	9	
	—	—	—	—	—	—	
Total Surface	1	..	3	30	33	34	
	—	—	—	—	—	—	
Grand Total	23	4	45	553	602	625	
	—	—	—	—	—	—	

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT
No. 52-B.

Table 5—Employment and Accidents by Type of Mining During 1936 to 1939.

Year	Men Employed	Man-Hours of Employment	Killed and Injured	Accident Rate per Million Man-Hours
Underground.				
1939	11,437	20,998,807	506	24.10
1938	10,729	16,575,015	404	24.37
1937	12,225	25,602,017	1,181	46.13
1936	9,330	18,386,226	737	40.08
Open-cut.				
1939	4,423	7,168,053	85	11.87
1938	3,311	4,921,185	45	9.14
1937	6,026	10,417,686	134	12.86
1936	5,176	8,050,816	100	12.42
Surface.				
1939	3,909	7,527,382	34	4.52
1938	3,966	7,019,230	27	3.85
1937	4,706	9,894,492	101	10.21
1936	4,086	8,255,579	60	7.27

By M. E. Kolhos and C. T. Herring,
Under supervision of W. W. Adams,
Employment Statistics Section,
Mineral Production and Economics Division.

P. N. 109641.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT
No. 52-C.

Table 2.—Accidents and Employment at Bituminous and Anthracite Coal-Mines During the Year 1938, Classified by Major Classes of Work.

	Bituminous	Penna. Anthracite[1]	Total
Number of employees:			
Underground	373,271	72,360	445,631
Open-cut	11,351	3,631	14,982
Dredge	.....	297	297
Surface	60,624	19,994	80,618
Total	445,246	96,282	541,528
Man-days:			
Underground	59,369,322	12,360,366	71,729,688
Open-cut	2,228,766	669,104	2,897,870
Dredge	.....	42,239	42,239
Surface	10,148,962	3,456,759	13,605,721
Total	71,747,050	16,528,468	88,275,518
Man-hours:			
Underground	417,345,108	86,548,574	503,893,682
Open-cut	16,309,101	4,716,324	21,025,425
Dredge	.....	365,941	365,941
Surface	71,661,952	24,221,448	95,883,400
Total	505,316,161	115,852,287	621,168,448

	Bituminous	Penna. Anthracite[1]	Total
Killed:			
Underground	823	204	1,027
Open-cut	18	10	28
Dredge	...	..	..
Surface	39	11	50
Total	880	225	1,105
Injured:			
Underground	33,692	12,885	46,577
Open-cut	1,036	182	1,218
Dredge	.....	14	14
Surface	2,066	1,439	3,505
Total	36,794	14,520	51,314
Production:			
Underground	319,242,392	38,142,297	357,384,689
Open-cut	30,305,134	5,095,341	35,400,475
Dredge	.....	571,024	571,024
Washery	.....	2,340,444	2,340,444
Total	349,547,526	46,149,106	395,696,632
Fatality rate (per million man-hours):			
Underground	1.972	2.357	2.038
Open-cut	1.104	2.120	1.332
Dredge	....	....	....
Surface	.544	.447	.519
Total	1.741	1.942	1.779

[1] Men employed in washery operations together with the accidents to such employees are included in surface figures.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-C.

Table 3.—Number of Fatalities and Nonfatal Injuries, by Causes of Accidents, at Bituminous-Coal and Anthracite Mines in the United States During the Calendar Year 1938.

Cause	Bituminous		Penna. Anth.		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Underground						
1. Falls of roof	413	6,677	105	1,700	518	8,377
2. Roof fall due to car or machine knocking out post	12	99	2	66	14	165
3. Falls of face or rib	47	3,513	15	1,674	62	5,187
4. Rush of coal, rock, or gob	2	259	6	186	8	445
5. Other falling material or objects	4	1,046	6	910	10	1,956
6. Falls of persons	1	1,396	4	919	5	2,315
7. Handling materials	3	5,248	..	2,516	3	7,764
8. Hand tools	1	2,596	1	1,092	2	3,688
9. Stepping on nails or other sharp objects	..	134	..	242	..	376
10. Striking or bumping against objects	2	402	1	264	3	666
11. Mine cars and mine locomotives	142	7,836	23	1,409	165	9,245
12. Explosions of gas or coal dust	84	143	20	139	104	282

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Cause	Bituminous		Penna. Anth.		Total	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
13. Explosives	23	253	11	176	34	429
14. Electricity	38	540	2	151	40	691
15. Machinery	27	2,738	..	472	27	3,210
16. Suffocation from natural gases	6	5	3	14	9	19
17. Mine fires	3	9	..	..	3	9
18. All other accidents underground	6	734	2	927	8	1,661
Total underground (excluding shaft)	814	33,628	201	12,857	1,015	46,485
Shaft and Slope						
19. Shaft and slope	9	64	3	28	12	92
Total underground (including shaft and slope)	823	33,692	204	12,885	1,027	46,557

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FOR IDENTIFICATION PLAINTIFFS' EXHIBIT
No. 52-D.

Table 8—Bituminous-coal Mines: Employment and Accident Data, According to Classification of Mines as "Gassy" or "Nongassy."[1]

	Mines Classified as "Gassy"	Mines Classified as "Nongassy"	Classification Not Reported
Production (short tons):			
1937	149,063,758	222,217,718	44,143,999
1938	111,650,012	173,622,382	33,969,998
1939	138,378,535	186,331,869	34,660,330
Number of employees underground:			
1937	131,665	229,147	52,324
1938	121,086	203,400	48,785
1939	128,275	194,243	48,273
Number of man-shifts worked underground:			
1937	27,360,774	43,862,931	9,347,980
1938	19,710,953	32,408,156	7,250,213
1939	23,644,098	33,979,539	7,658,189
Number of man-hours worked underground:			
1937	190,914,507	308,580,983	65,575,240
1938	138,224,889	228,195,227	50,924,992
1939	165,426,146	238,559,018	53,979,793
Number of men killed underground:			
1937	402	548	178
1938	233	465	125
1939	285	409	129

	Mines Classified as "Gassy"	Mines Classified as "Nongassy"	Classification Not Reported
Number of men injured underground:			
1937	15,846	28,014	4,408
1938	10,758	19,990	2,944
1939	11,495	20,201	3,126
Fatality rate per million man-hours underground:			
1937	2.106	1.776	2.714
1938	1.686	2.038	2.455
1939	1.723	1.714	2.390
Injury rate per million man-hours underground:			
1937	83.001	90.783	67.220
1938	77.830	87.600	57.811
1939	69.487	84.679	57.911

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-E.

Metal-Mine Accidents in the United States—1937.

Table 2.—All Mines: Number of Active Mines, Men Employed, Man-Days, Man-Hours of Employment, and Number Ended Dec. 31, 1937.

Kind of Mine	Number of Operators	Number of Mines	Men Employed				Man-Days of Employment				U
			Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	
Copper	100	142	13,078	2,895	5,202	21,175	3,934,098	986,839	1,576,825	6,497,762	
Iron	184	269	12,225	6,026	4,706	22,957	3,199,165	1,285,512	1,232,257	5,716,934	
Lead and zinc (Mississippi Valley)	189	252	7,627	61	778	8,466	1,645,803	11,285	175,226	1,832,314	
Gold, silver, and miscellaneous	(1)	7,932	36,240	3,054	16,520	55,814	9,144,641	486,000	3,617,963	13,248,604	
Gold, silver: Lode	(1)	5,146	32,769	910	7,418	41,097	8,295,788	154,208	1,870,302	10,320,298	
Gold: Placer	(1)	2,531	566	1,446	8,501	10,513	91,060	183,520	1,607,874	1,882,454	
Miscellaneous	225	255	2,905	698	601	4,204	757,793	148,272	139,787	1,045,852	
Nonmetal	405	445	3,101	3,583	3,333	10,017	735,499	816,334	1,009,163	2,560,996	
Total, 1937	(1)	9,040	72,271	15,619	30,539	118,429	18,659,206	3,585,970	7,611,434	29,856,610	
Total, 1936	(1)	8,451	61,327	14,075	25,530	100,932	15,872,685	3,028,685	6,308,535	25,209,905	

Hours of Employment, and Number Killed and Injured, by Kind of Mine, During the Year Dec. 31, 1937.

Man-Days of Employment			Average Hours of Employment per Man per Day				Man-Hours of Employment			
Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
986,839	1,576,825	6,497,762	8.00	8.00	8.00	8.00	31,472,780	7,895,221	12,614,103	51,982,104
1,285,512	1,232,257	5,716,934	8.00	8.10	8.03	8.03	25,602,017	10,417,686	9,894,492	45,914,195
11,285	175,226	1,832,314	8.02	8.00	8.10	8.03	13,198,653	90,280	1,419,789	14,708,722
486,000	3,617,963	13,248,604	7.97	8.18	8.16	8.03	72,889,230	3,975,566	29,538,412	106,403,208
154,208	1,870,302	10,320,298	7.98	7.99	8.02	7.98	66,161,851	1,232,604	14,992,105	82,386,560
183,520	1,607,874	1,882,454	7.91	8.46	8.36	8.35	720,663	1,553,267	13,444,834	15,718,764
148,272	139,787	1,045,852	7.93	8.02	7.88	7.93	6,006,716	1,189,695	1,101,473	8,297,884
816,334	1,009,163	2,560,996	7.96	8.35	7.80	8.02	5,853,936	6,815,782	7,866,485	20,536,203
3,585,970	7,611,434	29,856,610	7.99	8.14	8.06	8.02	149,016,616	29,194,535	61,333,281	239,544,432
3,028,685	6,308,535	25,209,905	8.02	8.15	7.99	8.03	127,274,741	24,676,240	50,407,744	202,358,725

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-E.

Metal-Mine Accidents in the United States—1938.

Table 2.—All Mines: Number of Active Mines, Men Employed, Man-Days, Man-Hours of Employment, and Number Ended Dec. 31, 1937—Continued.

Kind of Mine	Average Days Active				Average Hours per Man per Year				Number Killed				Number Inju	
	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut
Copper	301	341	303	307	2,407	2,727	2,425	2,455	45	3	1	49	4,072	280
Iron	262	213	262	249	2,094	1,729	2,103	2,000	26	6	1	33	1,155	128
Lead and zinc (Mississippi Valley)	216	185	225	216	1,731	1,480	1,825	1,737	9	..	..	9	723	5
Gold, silver, and miscellaneous	252	159	219	237	2,011	1,302	1,788	1,906	99	1	15	115	8,420	115
Gold, silver: Lode	253	169	252	251	2,019	1,355	2,021	2,005	83	1	10	94	7,912	68
Gold: Placer	161	127	189	179	1,273	1,074	1,582	1,495	..	..	4	4	49	30
Miscellaneous	261	212	233	249	2,068	1,704	1,833	1,974	16	..	1	17	459	17
Nonmetal	237	228	303	256	1,888	1,902	2,360	2,050	8	2	3	13	385	336
Total, 1937	258	230	249	252	2,062	1,869	2,008	2,023	187	12	20	219	14,755	864
Total, 1936	259	215	247	250	2,075	1,753	1,974	2,005	170	14	15	199	12,045	734

[1] Not available.

R IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-E.

Metal-Mine Accidents in the United States—1938.

oyed, Man-Days, Man-Hours of Employment, and Number Killed and Injured, by Kind of Mine, During the Year Ended Dec. 31, 1937—Continued.

Number Killed				Number Injured				Widows	Orphans	Rates per Million Man-Hours: Killed				Rates per Million Man-Hours: Injured			
Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total			Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
45	3	1	49	4,072	280	586	4,938	1	35	1.43	0.38	0.08	0.94	129.38	35.46	46.46	94.99
26	6	1	33	1,155	128	100	1,383	2	49	1.02	.58	.10	.72	45.11	12.29	101.07	30.12
9	..	..	9	723	5	28	756	8	20	.68	..	..	.61	54.78	55.38	19.72	51.40
99	1	15	115	8,420	115	1,456	9,991	60	93	1.36	.25	.51	1.08	115.52	28.93	49.29	93.90
83	1	10	94	7,912	68	933	8,913	51	82	1.25	.81	.67	1.14	119.59	55.17	62.23	108.19
..	..	4	4	49	30	449	528	1	3	..	..	.30	.25	67.99	19.31	33.40	33.59
16	..	1	17	459	17	74	550	8	8	2.66	..	.91	2.05	76.41	14.29	67.18	66.28
8	2	3	13	385	336	266	987	9	23	1.37	.29	.38	.63	65.77	49.30	33.81	48.06
187	12	20	219	14,755	864	2,436	18,055	117	220	1.25	.41	.33	.91	99.02	29.59	39.72	75.37
170	14	15	199	12,045	734	1,871	14,650	102	169	1.34	.57	.30	.98	94.64	29.75	37.12	72.40

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52.E.

Metal-Mine Accidents in the United States—1937.

Table 4.—All Mines: Average Length of Workday (Hours), Average Days Active, Average Hours per Man per Year, by States, During the Year Ended Dec. 31, 1937.

State	Average Length of Workday (Hours)				Average Days Active				Average Hours per Man per Year			
	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
Alabama	8.01	8.51	8.03	8.06	252	184	292	250	2,023	1,563	2,346	2,014
Alaska	8.01	8.97	8.79	8.57	280	102	208	209	2,241	915	1,829	1,788
Arizona	7.99	8.00	8.07	8.01	280	308	249	276	2,239	2,465	2,013	2,209
Arkansas	8.03	8.00	8.05	8.03	212	251	242	225	1,704	2,012	1,947	1,809
California	7.99	8.05	8.03	8.00	259	194	236	246	2,065	1,562	1,898	1,972
Colorado	8.00	7.96	8.09	8.01	255	213	223	247	2,037	1,691	1,806	1,976
Florida	...	8.35	8.47	8.40	...	220	279	242	....	1,835	2,369	2,033
Georgia	8.39	9.06	9.65	8.92	145	184	150	165	1,213	1,663	1,448	1,475
Idaho	8.01	8.10	8.00	8.01	255	94	219	239	2,040	765	1,752	1,917
Illinois	8.10	7.81	8.00	8.02	218	263	221	228	1,767	2,055	1,771	1,824
Iowa	7.95	8.03	8.00	7.96	187	259	215	196	1,486	2,082	1,721	1,557
Kansas	7.99	8.04	8.00	7.99	223	195	260	226	1,786	1,570	2,076	1,809
Kentucky	8.03	8.16	8.05	8.07	154	198	255	179	1,234	1,618	2,052	1,443
Louisiana	7.81	...	7.92	7.90	208	...	349	303	1,628	....	2,762	2,391
Maine	...	8.01	...	8.01	...	192	...	192	....	1,538	....	1,538
Michigan	8.00	8.03	8.00	8.00	273	161	261	264	2,186	1,293	2,091	2,114
Minnesota	8.00	8.04	8.00	8.02	269	221	251	240	2,152	1,774	2,007	1,926
Missouri	7.97	8.00	8.03	7.98	239	267	225	242	1,906	2,134	1,806	1,930
Montana	8.00	7.51	8.02	8.00	270	105	243	262	2,155	786	1,951	2,098
Nevada	7.97	8.00	8.01	7.98	263	246	242	256	2,093	1,968	1,935	2,045
New Hampshire	8.18	8.29	8.48	8.28	256	255	257	256	2,091	2,117	2,182	2,119
New Jersey	8.00	...	8.00	8.00	262	...	248	260	2,096	....	1,988	2,076
New Mexico	7.77	8.00	7.94	7.84	269	309	274	275	2,093	2,475	2,175	2,159
New York	7.85	7.86	7.98	7.88	279	294	297	283	2,193	2,315	2,372	2,230
North Carolina	8.31	8.17	8.27	8.25	263	177	245	220	2,188	1,442	2,022	1,816
Oklahoma	8.02	8.01	8.35	8.04	200	189	160	196	1,604	1,511	1,333	1,578
Oregon	7.94	8.09	8.07	8.00	203	127	183	184	1,613	1,026	1,473	1,474
Pennsylvania	8.25	8.43	8.76	8.48	176	320	306	258	1,450	2,698	2,684	2,187
South Carolina	8.09	10.00	8.24	8.23	334	180	231	289	2,700	1,799	1,907	2,378
South Dakota	8.00	7.96	7.98	7.99	292	248	333	305	2,335	1,972	2,659	2,439
Tennessee	8.10	9.34	8.63	8.55	234	249	272	248	1,892	2,328	2,348	2,117
Texas	7.77	8.06	7.17	7.34	283	220	334	315	2,199	1,775	2,395	2,309
Utah	7.99	8.00	8.00	8.00	266	348	303	290	2,129	2,781	2,426	2,319
Vermont	8.00	8.91	8.53	8.65	276	179	311	219	2,211	1,598	2,650	1,894
Virginia	8.00	8.29	8.02	8.09	244	223	282	248	1,955	1,846	2,260	2,006
Washington	7.99	8.00	8.04	8.01	202	206	145	185	1,618	1,652	1,162	1,483
Wisconsin	7.99	...	8.01	8.00	255	...	259	256	2,034	....	2,073	2,046
Wyoming	8.00	8.00	8.01	8.00	186	178	136	169	1,490	1,422	1,087	1,350
Other States[1]	8.14	8.05	8.92	8.16	201	169	200	191	1,634	1,357	1,784	1,559
Total, 1937	7.99	8.14	8.06	8.02	258	230	249	252	2,062	1,869	2,008	2,023
Total, 1936	8.02	8.15	7.99	8.03	259	215	247	250	2,075	1,753	1,977	2,005

[1] Includes Connecticut, Maryland, Massachusetts, Mississippi, Nebraska, Ohio, and West Virginia.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-F.

Coal-Mine Accidents in the United States, 1937.

Table 1.—Comparative Accident Statistics, 1936 and 1937.

	Bituminous			Anthracite [1]			Total		
	1936	1937	Percent of Change in 1937	1936	1937	Percent of Change in 1937	1936	1937	Percent Percent in 1937
Number of mines	6,572	6,537	—0.5						
Number of employees:									
Underground	405,027	413,136	+2.0	76,128	74,422	—2.2	481,155	487,558	+1.3
Open-cut	10,901	11,695	+7.3	4,913	4,476	—8.9	15,814	16,171	+2.3
Surface	66,572	65,940	—.9	21,041	20,187	—4.1	87,613	86,127	—1.7
Total	482,500	490,771	+1.7	102,082	99,085	—2.9	584,582	589,856	+.9
Man-days:									
Underground	79,698,806	80,571,685	+1.1	14,533,809	14,020,782	—3.5	94,232,615	94,592,467	+.4
Open-cut	2,073,127	2,389,892	+15.3	968,839	826,502	—14.7	3,041,966	3,216,394	+5.7
Surface	13,489,821	13,168,736	—2.4	4,127,091	3,893,475	—5.7	17,616,912	17,062,211	—3.1
Total	95,261,754	96,130,313	+.9	19,629,739	18,740,759	—4.5	114,891,493	114,871,072	—.017
Man-hours:									
Underground	559,733,518	565,079,730	+1.0	115,556,143	101,567,961	—12.1	675,289,661	666,638,691	—1.3
Open-cut	15,133,873	17,527,962	+15.8	7,827,731	5,975,531	—23.7	22,961,604	23,503,493	+2.4
Surface	95,033,145	92,969,503	—2.2	33,102,050	28,310,459	—14.5	128,135,195	121,279,962	—5.4
Total	669,900,536	675,568,195	+.8	156,485,924	135,853,951	—13.2	826,386,460	811,422,146	—1.8
Killed:									
Underground	1,034	1,128	+9.1	222	190	—14.4	1,256	1,318	+4.9
Open-cut	15	8	—46.7	8	6	—25.0	23	14	—39.1
Surface	49	62	+26.5	14	19	+35.7	63	81	+28.6
Total	1,098	1,198	+9.1	244	215	—11.9	1,342	1,413	+5.3
Injured:									
Underground	46,402	48,268	+4.0	16,090	13,593	—15.5	62,492	61,861	—1.0
Open-cut	1,208	1,275	+5.5	553	255	—53.9	1,761	1,530	—13.1
Surface	2,904	3,304	+13.8	2,419	1,582	—34.6	5,323	4,886	—8.2
Total	50,514	52,847	+4.6	19,062	15,430	—19.1	69,576	68,277	—1.9

[1] Men employed in washery and dredge operations are included with surface employees. Accidents to men employed in the washery and dredge are included in surface accidents.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 62-F.

Coal-Mine Accidents in the United States, 1937. Page 4.

Table 1.—Comparative Accident Statistics, 1936 and 1937—Continued.

	Bituminous			Anthracite			Total		
	1936	1937	Percent of Change in 1937	1936	1937	Percent of Change in 1937	1936	1937	Percent of Change in 1937
Production:									
Underground	409,250,811	415,425,475	+1.5	44,726,506	42,536,351	—4 8	453,977,317	457,991,826	+.9
Open-cut	27,217,522	31,622,011	+16.2	6,263,267	5,696,018	—8.2	33,420,789	37,318,029	+11.7
Washery	.....	.....	.....	3,193,972	2,722,599	—14.8	3,193,972	2,722,599	—14.8
Dredge	.....	.....	.....	546,684	760,474	+39.1	546,684	760,474	+39.1
Total	436,468,333	447,047,486	+2.4	54,670,429	51,745,442	—5.4	491,138,762	498,792,928	+1.6
Fatality rate (per million man-hours)									
Underground	1.847	1.996	+8.1	1.921	1.871	—2.6	1.860	1.977	+6.3
Open-cut	.991	.456	—54.0	1.022	1.004	—1.8	1.002	.596	—40.5
Surface	.516	.667	+29.3	.423	.684	+61.7	.492	.671	+36.4
Total	1 639	1.773	+8.2	1.559	1.583	+1.5	1.624	1.741	+7.2
Injury rate (per million man-hours):									
Underground	82.900	85.419	+3.0	139.240	133.832	—3.9	92.541	92.795	+.3
Open-cut	79.821	72.741	—8.9	70.646	42.674	—39.6	76.693	65.097	—15.1
Surface	30.558	35.539	+16.3	73.077	55.880	—23 5	41.542	40.217	—3.2
Total	75.405	78.226	+3.7	121.813	113.578	—6.8	84.193	84.145	—.1
Fatality rate (per million short tons):									
Underground	2.527	2.715	+7.4	4.963	4.464	—10.1	2.767	2.878	+4.0
Open-cut	.551	.253	—54.1	1.290	1.053	—18.4	.688	.375	—45.5
Total	2.516	2.680	+6.5	4.463	4.155	—6 9	2.732	2.833	+3.7
Injury rate (per million short tons):									
Underground	113.383	116.189	+2.5	359.742	319.337	—11 2	137.654	135.070	—1.9
Open-cut	44.383	40.320	—9.2	89.147	44.768	—49.8	52.692	40.999	—22.2
Total	115.733	118.213	+2.1	348.671	298.191	—14.5	141.663	136.884	—3.4

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-G.

Metal-Mine Accidents in the United States—1938,

Table 2.—All Mines: Number of Active Mines, Men Employed, Man-Days, Man-Hours of Employment, and Number Ended Dec. 31, 1938.

Kind of Mine	Number of Operators	Number of Mines	Men Employed				Man-Days of Employment			
			Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
Copper	(1)	96	10,743	2,667	4,172	17,582	2,393,774	761,728	1,173,786	4,329,288
Iron	(2)	184	10,729	3,311	3,966	18,006	2,071,746	605,452	878,481	3,555,679
Lead and zinc (Mississippi Valley)	146	194	5,994	51	391	6,436	1,228,809	10,495	91,091	1,330,395
Gold, silver, and miscellaneous	(1)	6,136	31,643	3,243	16,591	51,477	7,934,947	483,656	3,620,614	12,039,217
Gold, silver: Lode	(1)	3,164	28,289	727	7,219	36,235	7,081,889	148,449	1,763,847	8,994,185
Gold: Placer	(1)	2,724	628	1,811	8,860	11,299	114,060	219,447	1,730,231	2,063,738
Miscellaneous	(1)	248	2,726	705	512	3,943	738,998	115,760	126,536	981,294
Nonmetal	557	623	2,685	3,981	2,860	9,526	613,189	779,912	858,184	2,251,285
Total 1938	(1)	7,233	61,794	13,253	27,980	103,027	14,242,465	2,641,243	6,622,156	23,505,864
Total, 1937	(1)	9,040	72,271	15,619	30,539	118,429	18,659,206	3,585,970	7,611,434	29,856,610

[1] Not available.

[2] Undetermined number of small pits in Alabama and Missouri.

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-G.

Metal-Mine Accidents in the United States—1938,

nes, Men Employed, Man-Days, Man-Hours of Employment, and Number Killed and Injured, by Kind of Mine, During the Year Ended Dec. 31, 1938.

Men Employed			Man-Days of Employment				Average Hours of Employment per Man per Day				Man-Days of Employment			
Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
2,667	4,172	17,582	2,393,774	761,728	1,173,786	4,329,288	8.00	8.00	8.00	8.00	19,146,972	6,093,829	9,389,141	34,629,942
3,311	3,966	18,006	2,071,746	605,452	878,481	3,555,679	8.00	8.13	7.99	8.02	16,575,015	4,921,185	7,019,230	28,515,430
51	391	6,436	1,228,809	10,495	91,091	1,330,395	7.96	8.20	7.97	7.96	9,783,716	86,102	725,660	10,595,478
3,243	16,591	51,477	7,934,947	483,656	3,620,614	12,039,217	7.98	8.11	8.12	8.02	63,284,426	2,920,671	29,396,774	96,601,871
727	7,219	36,235	7,081,889	148,449	1,763,847	8,994,185	7.98	8.20	7.99	7.98	56,490,426	1,217,870	14,088,089	71,796,385
1,811	8,860	11,299	114,060	219,447	1,730,231	2,063,738	7.91	8.07	8.26	8.22	901,763	1,770,236	14,294,523	16,966,522
705	512	3,943	738,998	115,760	126,536	981,294	7.97	8.06	8.01	7.99	5,892,237	932,565	1,014,162	7,838,964
3,981	2,860	9,526	613,189	779,912	858,184	2,251,285	7.97	8.17	7.65	7.92	4,887,179	6,372,130	6,568,136	27,827,445
13,253	27,980	103,027	14,242,465	2,641,243	6,622,156	23,505,864	7.98	8.10	8.02	8.01	113,677,308	21,393,917	53,098,941	188,170,166
15,619	30,539	118,429	18,659,206	3,585,970	7,611,434	29,856,610	7.99	8.14	8.06	8.02	149,016,616	29,194,535	61,333,281	239,544,432

FOR IDENTIFICATION PLAINTIFFS' EXHIBIT No. 52-G.

Metal-Mine Accidents in the United States—1938.

Table 2.—All Mines: Number of Active Mines, Men Employed, Man-Days, Man-Hours of Employment, and Number Ended Dec. 31, 1938—Continued.

Kind of Mine	Average Days Active				Average Hours per Man per Year				Number Killed				Number Inj	
	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut
Copper	223	286	281	246	1,782	2,285	2,251	1,970	20	2	2	24	1,725	149
Iron	193	183	222	197	1,545	1,486	1,770	1,584	16	3	1	20	388	42
Lead and zinc (Mississippi Valley)	205	206	233	207	1,632	1,688	1,856	1,646	15	..	..	15	578	3
Gold, silver, and miscellaneous	251	149	218	234	2,000	1,209	1,772	1,877	87	2	2	91	7,504	170
Gold, silver: Lode	250	204	244	248	1,997	1,675	1,952	1,981	77	..	1	78	7,087	79
Gold: Placer	182	121	195	183	1,436	977	1,613	1,502	..	1	1	2	30	53
Miscellaneous	271	164	245	249	2,161	1,323	1,981	1,988	10	1	..	11	387	38
Nonmetal	228	196	300	236	1,820	1,601	2,297	1,871	1	4	1	6	242	306
Total 1938	230	199	237	228	1,840	1,614	1,898	1,826	139	11	6	156	10,437	670
Total, 1937	258	230	249	252	2,062	1,869	2,008	2,023	[1]187	12	20	219	14,755	864

[1] Number of widows and orphans not completely reported by mining companies.

[redacted]

TIFICATION PLAINTIFFS' EXHIBIT No. 52-G.

an-Days, Man-Hours of Employment, and Number Killed and Injured, by Kind of Mine, During the Year Ended Dec. 31, 1938—Continued.

Number Killed				Number Injured						Rates per Million Man-Hours							
										Killed				Injured			
ound	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Widows[1]	Orphans[1]	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
20	2	2	24	1,725	149	224	2,098	10	14	1.04	0.33	0.21	0.69	90.09	24.45	23.86	60.58
6	3	1	20	388	42	26	456	15	16	.97	.61	.14	.70	23.41	8.53	3.70	15.99
5	..	..	15	578	3	27	608	13	23	1.53	..	..	1.42	59.08	34.84	37.21	57.38
7	2	2	91	7,504	170	1,160	8,834	46	86	1.37	.51	.07	.94	118.58	43.36	39.46	91.45
7	..	1	78	7,087	79	700	7,866	46	86	1.36	..	.07	1.09	125.45	64.87	49.69	109.56
.	1	1	2	30	53	413	496	..	..	..	.56	.07	.12	33.27	29.94	28.89	29.23
0	1	..	11	387	38	47	472	..	..	1.70	1.07	..	1.40	65.68	40.75	46.34	60.21
1	4	1	6	242	306	178	726	3	..	.20	.63	.15	.34	49.52	48.02	27.10	40.72
9	11	6	156	10,437	670	1,615	12,722	87	139	1.22	.51	.11	.83	91.81	31.32	30.41	67.61
7	12	20	219	14,755	864	2,436	18,055	117	220	1.25	.41	.33	.91	99.02	29.59	39.72	75.37

FOR IDENTIFICAION PLAINTIFFS' EXHIBIT No. 52-G.

Table 4.—All Mines: Average Length of Workday (Hours), Average Days Active, Average Hours per Man per Year, by States, During the Year Ended Dec. 31, 1938.

State	Average Length of Workday (Hours)				Average Days Active				Average Hours per Man per Year			
	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total	Underground	Open-cut	Surface	Total
Alabama	8.00	9.17	8.00	8.08	191	192	279	199	1,525	1,759	2,233	1,609
Alaska	8.00	8.00	8.00	8.00	291	100	212	211	2,329	801	1,694	1,691
Arizona	8.00	8.00	7.99	8.00	272	269	240	263	2,176	2,149	1,915	2,107
Arkansas	8.05	8.02	8.28	8.08	254	213	246	246	2,044	1,706	2,039	1,988
California	7.97	8.00	8.34	8.12	260	177	228	240	2,077	1,418	1,898	1,949
Colorado	7.97	7.96	8.06	7.98	254	189	226	245	2,021	1,508	1,825	1,959
Florida	...	8.15	7.90	8.04	...	101	250	214	....	1,557	1,974	1,719
Georgia	8.44	8.73	8.99	8.70	189	244	150	213	1,593	2,133	1,349	1,851
Idaho	8.13	8.02	8.00	8.10	249	111	225	236	2,027	891	1,797	1,914
Illinois	8.17	8.00	8.00	8.11	174	187	234	183	1,423	1,494	1,869	1,486
Iowa	7.89	8.16	8.00	7.93	183	211	248	188	1,445	1,721	1,980	1,489
Kansas	7.91	7.91	7.94	7.91	228	117	245	227	1,801	928	1,949	1,797
Kentucky	8.06	8.00	8.05	8.04	169	173	167	170	1,365	1,385	1,346	1,368
Louisiana	7.80	...	7.94	7.91	229	...	354	317	1,788	...	2,806	2,507
Maine	...	8.06	...	8.06	...	146	...	146	....	1,176	....	1,176
Michigan	8.00	8.10	8.01	8.01	217	179	231	220	1,735	1,453	1,852	1,765
Minnesota	8.00	8.02	7.99	8.00	185	170	219	186	1,480	1,361	1,753	1,493
Missouri	7.91	8.00	8.00	7.93	177	208	220	185	1,396	1,664	1,761	1,464
Montana	7.99	7.88	8.01	8.00	168	136	209	175	1,340	1,070	1,673	1,403
Nevada	7.88	7.99	7.99	7.92	254	248	222	245	2,004	1,977	1,770	1,940
New Hampshire	8.00	8.18	8.13	8.12	300	168	286	210	2,400	1,371	2,323	1,703
New Jersey	8.01	8.00	8.00	8.01	237	240	250	239	1,895	1,920	1,998	1,915
New Mexico	7.91	8.00	7.93	7.92	281	258	281	278	2,219	2,065	2,229	2,200
New York	7.75	8.27	7.92	7.81	218	238	281	229	1,689	1,971	2,223	1,790
North Carolina	8.35	7.96	8.33	8.14	226	181	201	198	1,890	1,444	1,671	1,613
Ohio	8.02	8.00	....	8.02	201	300	...	205	1,612	2,400	....	1,647
Oklahoma	7.98	8.05	7.95	7.98	218	175	248	215	1,740	1,409	1,971	1,716
Oregon	6.91	8.13	7.97	7.49	228	112	209	194	1,572	910	1,667	1,451
Pennsylvania	8.00	7.98	7.62	7.93	295	310	312	305	2,357	2,476	2,375	2,415
South Carolina	10.12	9.75	8.71	9.70	207	316	144	252	2,096	3,081	1,254	2,444
South Dakota	8.00	8.08	8.02	8.01	315	193	305	306	2,524	1,562	2,445	2,451
Tennessee	8.03	8.52	8.36	8.25	252	217	267	247	2,022	1,847	2,231	2,035
Texas	8.20	8.19	7.10	7.44	282	208	355	320	2,308	1,706	2,520	2,379
Utah	7.98	8.00	7.96	7.98	239	298	254	254	1,909	2,387	2,024	2,029
Vermont	10.27	9.79	9.24	9.74	200	186	237	196	2,057	1,826	2,191	1,908
Virginia	8.16	8.13	8.03	8.11	231	188	244	225	1,888	1,532	1,961	1,821
Washington	8.01	8.00	8.04	8.02	267	182	215	243	2,136	1,456	1,732	1,949
Wisconsin	7.98	8.00	8.00	7.98	217	75	235	220	1,730	600	1,879	1,760
Wyoming	8.00	8.00	8.05	8.01	122	113	135	121	974	900	1,088	971
Other States[1]	8.00	8.45	...	8.29	217	144	...	165	1,738	1,220	....	1,364
Total 1938	7.98	8.10	8.02	8.01	231	199	237	228	1,840	1,614	1,898	1,826
Total 1937	7.99	8.14	8.00	8.02	258	230	249	252	2,062	1,869	2,008	2,023

[1] Includes Connecticut, Maryland, Massachusetts, Nebraska, and West Virginia.

PLAINTIFFS' EXHIBIT NO. 12
4901

UNITED STATES DEPARTMENT OF THE INTERIOR
Harold L. Ickes, Secretary
BUREAU OF MINES
R. R. Sayers, Director

BITUMINOUS COAL

BY M. E. McMILLAN, R. L. ANDERSON
AND W. H. YOUNG

Chapter from
MINERALS YEARBOOK 1940
REVIEW OF 1939
WITH FINAL STATISTICS FOR 1938

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BITUMINOUS COAL[1]

By M. E. McMillan, R. L. Anderson, and W. H. Young

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Bituminous-coal production in 1939 was considerably greater than in 1938. During the first quarter production was high to fill orders purchased for storage by consumers in anticipation of possible suspension of mining when the wage contract expired on March 31. Output declined sharply in April and May when work ceased pending the signing of a new wage contract. The outbreak of war in Europe in September stimulated general business, particularly the heavy industries, and the production of coal increased substantially.

During the year the Bituminous Coal Division, United States Department of the Interior (formerly the National Bituminous Coal Commission), proceeded with the task of building a minimum price structure that would comply in detail with requirements of the law.

[1] The collection of production statistics of the bituminous-coal industry previously conducted by the Bureau of Mines was transferred to the National Bituminous Coal Commission July 1, 1937. The cooperation of the Coal Commission (now the Bituminous Coal Division, U. S. Department of the Interior) in contributing this chapter to Minerals Yearbook to maintain the continuity of the bituminous-coal series is gratefully acknowledged.

Data for 1939 are preliminary; detailed statistics with final revisions will be released later. Data for 1938 are final.

Production.—The output of soft coal in 1939 was 393,065,000 tons, a 13-percent increase over 1938. The coal industry made substantial gains in common with general business activity during the latter half of the year, and the total output for the year was 27 percent above the record low of 1932, although 27 percent below the 534,989,000 tons of 1929. (See figs. 1, 2, and 4.)

Imports and exports.—Exports of bituminous coal rose from 10,490,269 tons in 1938 to 11,590,478 in 1939, a 10-percent increase. At the same time imports, which are relatively insignificant, rose 47 percent from 241,305 tons in 1938 to 355,115 in 1939. As in the past, virtually all these imports and more than 90 percent of the exports represented trade with Canada. (See fig. 10.)

Changes in stocks.—The reserve supply of coal in the hands of industrial consumers and retail coal yards rose from a total of 40,720,000 tons at the beginning of the year to 44,571,000 at the close. Between the same periods, stocks on the upper Lake docks declined 295,000

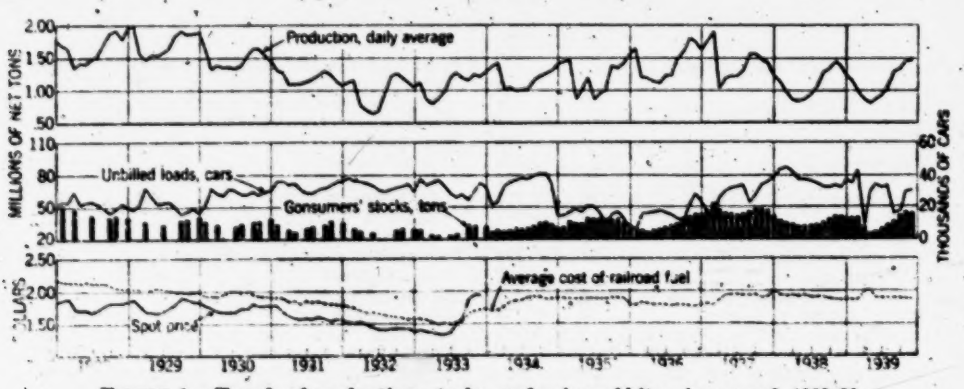

FIGURE 1.—Trends of production, stocks, and prices of bituminous coal, 1928–39.

tons, and unbilled coal in cars at the mines or classification yards fell 74,000 tons. (See fig. 1 and table 18.)

Consumption.—After allowances have been made for foreign trade and changes in consumers' stocks the consumption of bituminous coal in 1939 totaled 377,978,637 tons, an increase of 33,328,837 from 1938. Each of the more important classes of consumers shared the increase, which ranged from 69 percent for beehive coke ovens to 7 percent for railroads. (See fig. 3 and table 4.)

Distribution.—Shipments of bituminous coal during 1939 rose substantially above the 1938 level in each of the primary channels of distribution. Changes in the monthly volume of the more important movements are shown in figure 4.

Freight rates.—The average railroad freight charge per net ton of revenue bituminous coal amounted to $2.23 in 1939 compared with $2.27 in 1938.

Trend of prices.—Spot market quotations indicate that producers averaged less per ton for their coal in 1939 than in 1938. (See tables 1 and 15.)

Mechanization.—Data available early in 1940 [2] indicate continuation of the sharp advance in mechanical loading of bituminous coal.

Sales of mechanical loading equipment for use in bituminous-coal mines, in terms of total capacity, increased 21.4 percent in 1939 over

[2] Coal Age, February 1940, p. 63, and Mining Congress Journal, February 1940, p. 23.

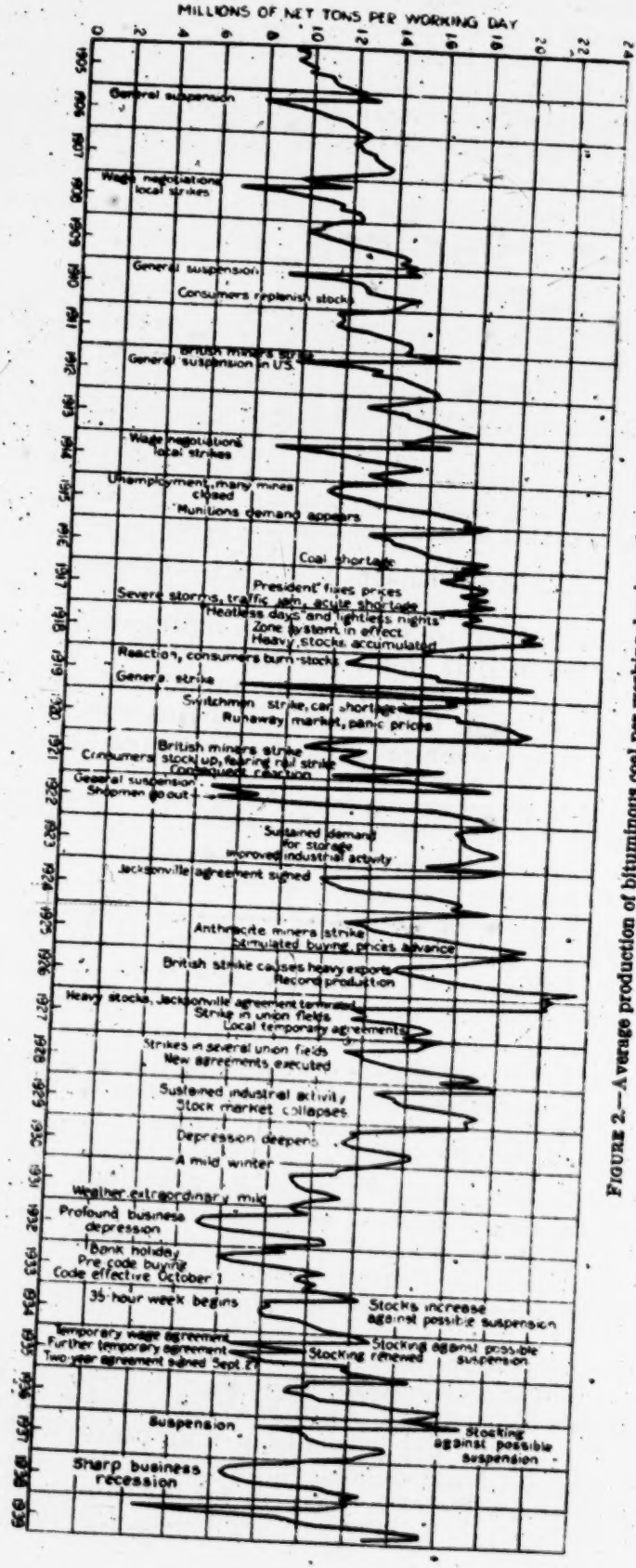

FIGURE 2.—Average production of bituminous coal per working day in each month, 1905-39.

1938. Reports from 31 manufacturers show sales of 292 mobile loaders for the current year as against 241 in 1938 and 344 in the peak year 1936. Conveyor sales totaled 1,095 in 1939 compared with 749 in 1938 and 682 in 1936.

Stripping operations.—The volume of bituminous coal produced by stripping decreased from 31,750,853 tons in 1937 to 30,406,855 in 1938.

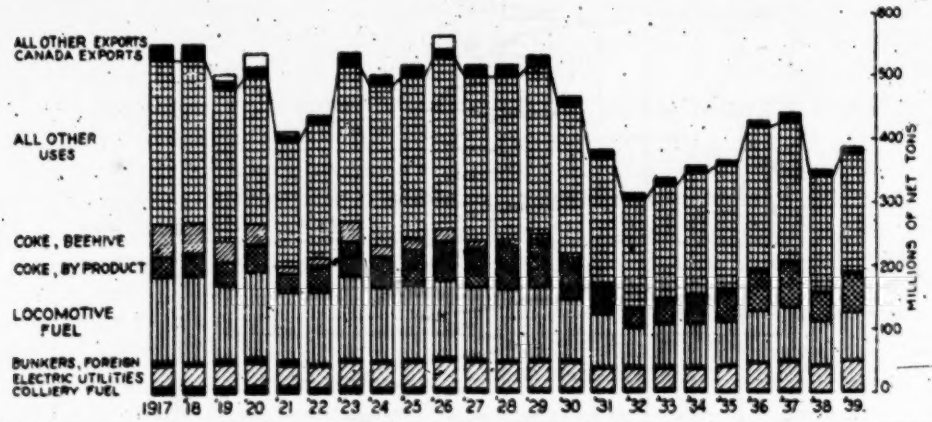

FIGURE 3.—Tonnage of bituminous coal absorbed by the principal branches of consumption, 1917-39.

However, the percentage of total production represented by strip coal rose from 7.1 percent in 1937 to 8.7 percent in 1938.

Trend of employment.—Estimates of the number of men employed at bituminous-coal mines in 1939 indicate a slight drop from the 1938 figure (441,333). Indexes compiled by the Bureau of Labor Statistics

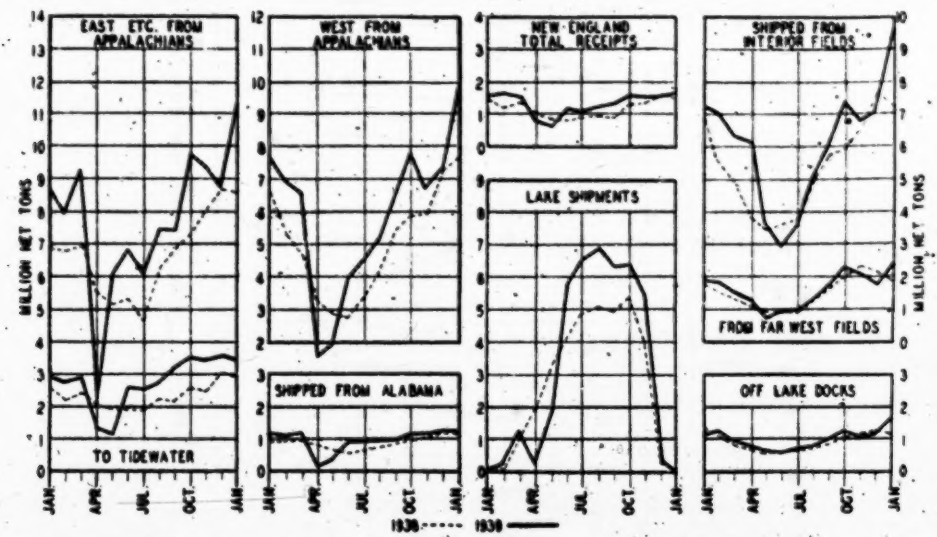

FIGURE 4.—Monthly movement of bituminous coal in the major channels of distribution, 1938-39.

upon the basis of a sample that includes more than half the workers in the industry show a 1-percent drop in employment for 1939 if normal operations during the April-May suspension are assumed. Reports from the mining departments of nine States with more than 60 percent of the bituminous-coal employees in the United States indicate an average decline of 0.4 percent for the same period. These data suggest an estimate of 437,000 employees for 1939. In com-

parison with 1929, when the average number of men at bituminous-coal mines totaled 502,993, the 1939 figure represents a decrease of 66,000.

Statistics of employment for bituminous-coal workers cannot be interpreted properly without considering the intermittent operations that characterize most coal mines. In 1938, for instance, the bituminous mines were operated an average of 162 days out of the 261 possible under the 5-day week of the union wage agreement. Consequently, a substantial proportion of the manpower on the rolls of the industry was idle throughout the year, the number depending on the market and the season.

Trend of capacity.—The potential full-time output of active mines in the bituminous-coal industry decreased 7 percent between 1937 and 1938. The coal industry reached its peak capacity in 1923 when, upon the basis of 308 operating days, the potential output was 970,000,000 tons. Subsequent liquidations forced the closing or abandonment of thousands of mines and reduced the indicated capacity to 622,000,000 tons in 1934. The potential output upon a 308-day basis was 663,000,000 tons in 1938. Under the 5-day week full-time operations are limited to approximately 261 days. The potential capacity of operating mines upon a 261-day basis was 562,000,000 tons in 1938 compared with the total actual production of 348,544,764 tons.

Trend of fuel efficiency.—Since the World War period, improvements in the technology of fuel application have contributed to a continuing decline in the demand for coal for industrial uses. Although the effect of such improvements is cumulative from year to year, the rate of decline is smaller in recent years as the remaining margin of possible increase in fuel efficiency becomes progressively less.

The class I steam railroads reduced the average coal consumption by coal-fired locomotives from 117 pounds per 1,000 gross ton-miles of freight service in 1938 to 115 pounds in 1939. For all railroad freight service, including oil-burning and electric locomotives, the average energy consumption, converted to coal equivalent, was reduced from 115 pounds per 1,000 gross ton-miles in 1938 to 112 pounds in 1939. During the same period, public utility power plants lowered the average fuel consumption from 1.41 to 1.39 pounds per kilowatt-hour. In the iron and steel industry, the average consumption of coke in iron blast furnaces was reduced from 1.801 in 1938 to 1.778 pounds in 1939 per net ton of pig iron produced, representing a drop from 2,583.9 to 2,547.3 pounds of coking coal per net ton (2,894 and 2,853 pounds per gross ton) of pig iron for 1938 and 1939, respectively.

Improvements in combustion practice among domestic consumers and small industrial and commercial establishments also are helping to decrease the aggregate volume of fuel consumption. Furthermore, increasing economy in combustion methods is being supplemented by improvements in space-heating methods and by progress in building construction and insulation.

Competing sources of energy.—While improvements in fuel technology have acted to lessen the demand for coal in the industries affected, these same improvements have constituted a defense of coal against the spread of other sources of energy into the previous markets for coal. In the electric utility field, for example, consumption of coal has increased coincident with the development of hydroelec-

tric projects. During the past five years, production of public utility electrical energy by steam power plants increased from 54,649,829,000 kilowatt-hours in 1935 to 85,006,941,000 in 1939, an increase of 45 percent. Statistics of current and projected expenditures for new steam plant construction indicate a continuation of this trend in the near future. Edison Electric Institute reports expenditures in 1939 of $70,560,000 for steam plants, and budget estimates for 1940 indicate a probable expenditure of $183,700,000, which will add approximately 1,650,000 kilowatt-hours to the total steam-generating capacity in 1940.

Despite the improvements in fuel economy in the utilities industry, the total coal consumption for power generation has continued to increase since 1933 except in 1938, when there was a 10-percent decrease compared with the previous year, attributable to the general slump in industrial activity and total power consumption. The upward trend was resumed in 1939 with a total coal consumption of 46,223,000 tons, an all-time high record for this industry. In addition, the utilities steam power plants used 17,423,000 barrels of fuel oil (approximately equivalent to 4,356,000 tons of coal) and 191,131,000,000 cubic feet of natural gas (equivalent to 8,310,000 tons of coal). During the past 20 years the growth of the utilities industry has approximately offset the effect of improved fuel technology in relation to aggregate coal consumption, and the annual tonnage used has moved up and down from the low of 30,000,000 to the high of 46,000,000 as general industrial activity varied. Use of fuel oil also has followed an irregularly horizontal course during this period, but the consumption of gas in utility electric power plants has increased from 22 billion feet in 1920 to 191 billion in 1939.

In the field of domestic heating comparable figures are available for mechanical firing equipment only. In this category, the use of oil and gas appears to be growing more rapidly than coal, basing estimates upon sales of new equipment. Sales of oil burners for domestic use rose from 106,933 units in 1938 to 165,711 in 1939, a 55-percent increase, whereas sales of domestic stokers (under 61 pounds per hour capacity) using bituminous coal, rose from 71,978 units in 1938 to 78,332 in 1939, a 9-percent increase. However, this does not entirely represent the relative positions of the two competing fuels in new plants because the oil-burner sales cover virtually all installations in which oil is used, while the sales of coal cover only mechanical stokers and do not consider new installations of hand-fired equipment. During the same period sales of natural gas for domestic use increased from 352,949,000,000 to 367,733,000,000 feet, a 4-percent gain (not including natural gas in mixtures sold by manufactured-gas companies).

The use of coal for locomotive fuel by railways decreased 17 percent in 1938 compared to 1937 and came back 7 percent in 1939, while the use of fuel oil followed an almost identical course, decreasing 13 percent in 1938 and increasing 3 percent in 1939. The consumption of railroad fuel varies with the fluctuations in volume of traffic.

The use of Diesel fuel increased rapidly, rising from 25,470,248 gallons in 1937 to 34,842,982 in 1938 and 48,754,423 in 1939. In the aggregate, however, Diesel fuel constitutes as yet only about a quarter of 1 percent of the total railroad fuel.

Statistics for 1939 show that the use of coal and oil by railroads, electric utility power plants, and steamships exceeded that in 1938 by 10 percent, while the oil consumption increased 7 percent. In the same period, consumption of natural gas by all industrial, commercial, and domestic consumers increased 7 percent.

Statistical tables—1939.—Tables 1 to 5 give a statistical record of the bituminous-coal industry in 1939, as indicated by available preliminary data. They also show comparative statistics for the indicated earlier years, including final figures for 1938. (See fig. 5.)

TABLE 1.—*Salient statistics of the bituminous-coal industry, 1938–39*

[All tonnage figures represent net tons]

	1938	1939 (preliminary)	Change in 1939
Production	348,544,764	393,065,000	+12.8%
Exports to Canada and Mexico [1]	9,560,717	9,975,919	+4.3%
Exports overseas and all other [1]	929,552	1,614,559	+73.7%
Imports [1]	241,305	355,115	+47.2%
Consumption in the United States (calculated) [2]	344,649,800	377,978,637	+9.7%
Stocks at end of year:			
Industrial consumers and retail yards	40,720,000	44,571,000	+9.5%
Stocks on upper Lake docks	7,885,516	7,590,254	−3.7%
Unbilled loads, at mines or in classification yards [3]	1,607,200	1,533,100	−4.6%
Price indicators (average per net ton):			
Average cost of railroad fuel purchased, f. o. b. mines [4]	$1.92	$1.91	−1¢
Average cost of coking coal at merchant byproduct ovens [5]	$4.61	$4.57	−4¢
Average cost of bunker coal to vessels in foreign trade [6]	$4.85	$4.83	−2¢
Average value of exports to all countries (at port) [7]	$3.63	$3.69	+6¢
Average retail price—38 cities [8]	$8.61	$8.52	−9¢
Average railroad freight charge per net ton [9]	$2.27	$2.23	−4¢
Underground loading machinery sold to bituminous mines: [10]			
Mobile loading machines (number)	241	292	+21.2%
Scrapers (number)	6	18	+200.0%
Conveyors, including those with duckbills (units)	749	1,095	+46.2%
Pit-car loaders (units)	139	2	−98.6%
Average number of men employed at mines operating [11]	441,333	437,000	−1.0%
Fuel-efficiency indicators:			
Pounds coal per kw.-hr. at electric power plants [12]	1.41	1.39	−1.4%
Pounds per 1,000 gross ton-miles—railroads [13]	115	112	−2.6%

[1] Figures on imports and exports compiled by M. B. Price, of the Bureau of Mines, from records of the Bureau of Foreign and Domestic Commerce.
[2] Production plus imports minus exports plus or minus net changes in consumers' stocks.
[3] Association of American Railroads.
[4] Interstate Commerce Commission. Excludes freight charges.
[5] As reported by coke operators to the Bureau of Mines.
[6] Computed from records of the Bureau of Foreign and Domestic Commerce.
[7] Computed from records of the Bureau of Foreign and Domestic Commerce. The figure represents the average value at the point of export of shipments to all foreign countries including Canada.
[8] Bureau of Labor Statistics.
[9] Average receipts per net ton of revenue bituminous coal originated, as reported by the Interstate Commerce Commission.
[10] Fraser, Thomas, Tryon, F. G., Gallagher, J. J., and van Sicien, M., Mechanization Sales: Coal Age, February 1940, pp. 63–65, and Mining Congress Journal, February 1940, pp. 23–27.
[11] The figure for 1938 is based upon reports of mine operators producing over 1,000 tons. The figure for 1939 is estimated from the employment index of the Bureau of Labor Statistics, which covers about half of the men employed in the industry, and from current monthly reports of 9 State mine departments which represent approximately 60 percent of all the bituminous-coal-mine workers in the United States.
[12] Federal Power Commission.
[13] Interstate Commerce Commission; includes coal equivalent of fuel oil consumed.

TABLE 2.—*Salient trends in bituminous mine operation, 1913–38*

	1913	[1] 1923	1929	1932	1934	1936	1937	1938
Production:								
Loaded at mines for shipment by rail ..... net tons	392,743,412	488,974,496	474,868,165	276,142,037	313,303,729	370,762,901	390,237,575	295,336,027
Loaded at mines for shipment by water ..... do	10,690,834	16,884,799	23,066,289	9,365,782	15,127,968	24,867,682		16,902,969
Made into coke at mines ..... do	49,458,320	27,859,816	9,128,607	1,028,458	1,647,805	2,728,577	4,834,084	1,359,876
Used at mines for colliery fuel ..... do	11,670,903	8,765,011	4,662,974	2,780,889	3,175,067	3,227,447	3,082,095	2,493,017
Commercial sales by truck or wagon ..... do	13,871,828	22,081,040	23,262,558	20,392,706	[2] 18,739,320	27,929,296	37,762,612	25,892,058
Other local sales, used by employees, etc ..... do					7,374,143	9,571,997		6,880,817
Total production ..... do	478,435,297	564,564,662	534,988,593	309,709,872	359,368,022	439,087,903	[3] 445,531,449	348,844,764
Number of active mines of commercial size:								
Class 1 (200,000 tons or more) ..... number	694	748	827	465	551	660	661	526
Class 2 (100,000 to 200,000 tons) ..... do	837	935	660	477	485	452	469	402
Class 3 (50,000 to 100,000 tons) ..... do	959	1,176	668	469	479	460	448	415
Class 4 (10,000 to 50,000 tons) ..... do	1,558	2,742	1,361	1,111	1,072	1,095	1,117	1,042
Class 5 (1,000 to 10,000 tons) ..... do	1,728	3,730	2,541	2,905	3,671	4,218	3,853	3,392
Total number over 1,000 tons ..... do	5,776	9,331	6,057	5,427	[3] 6,258	[3] 6,875	[3] 6,548	5,777
Percent of output from mines in classes 1 and 2 ..... percent	75.4	70.4	83.1	77.5	80.5	83.3	84.1	81.1
Average number of men employed at mines active:								
Underground ..... men	494,238	600,305	433,999	345,905	384,947	399,367	(4)	370,604
Surface, including strip pits ..... do	77,644	104,488	68,994	60,475	73,064	77,837	(4)	71,329
Total ..... do	571,882	704,793	502,993	406,380	458,011	477,204	491,854	441,933
Average number of days mines operated ..... days	232	179	219	[5] 146	178	190	193	162
Nominal length of established full-time week [6] ..... hours	51.6	48.4	48.5	48.6	40.0 and 35.1	35.1	35.1	35.1
Capacity of active mines with existing labor force:								
Per year of 308 days (full time before October 1933) ..... net tons	635,000,000	970,000,000	782,000,000	653,000,000	622,000,000	680,000,000	710,000,000	663,000,000
Per year of 261 days (5-day week basis) ..... do	538,000,000	823,000,000	638,000,000	554,000,000	527,000,000	576,000,000	601,000,000	562,000,000
Output per man per day [7] ..... do	3.61	4.47	4.85	5.22	4.40	4.62	4.69	4.89
Output per man per year ..... do	837	801	1,064	762	785	920	906	790
Underground output cut by machine ..... percent	50.7	68.3	78.4	84.1	84.1	84.8	(4)	87.5
Underground output mechanically loaded ..... do		3	7.4	12.6	12.2	16.3	20.2	(4)
Quantity mined by stripping ..... net tons	[8] 1,280,946	11,940,134	20,268,099	19,641,128	20,789,641	28,125,857	31,750,853	30,406,855
Quantity cleaned by wet or pneumatic processes [9] ..... do	22,060,691	20,140,385	32,271,950	27,357,599	35,853,714	53,332,040	(4)	(4)

[1] The earliest year in which figures were collected in strictly comparable form was 1933, when commercial sales by truck and wagon were 15,462,739 tons.
[2] The total production differs from the sum of the items shown by the amount of the changes in inventory and of tonnage not accounted for in the distribution analysis.
[3] The increase in number of mines shown for 1934–37 over preceding years is due partly to more complete coverage of small trucking mines (producing over 1,000 tons a year). See Minerals Yearbook, 1936, pp. 561–564.
[4] Data not available.
[5] The figures represent the full-time week as reported by the operator, not the hours actually worked by the men.
[6] Affected by changes in length of working day.
[7] Figures for 1914, the year of earliest record.

[2] Affected by changes in length of working day.
[3] Figures for 1914, the year of earliest record.

TABLE 3.—*Preliminary statistics of coal production in 1939, by States, with final figures for earlier years*

State	Production, in thousands of net tons								Change in 1939 (per-cent)	Percent of total bituminous							
	1913	1923	1929	1932	1936	1937	1938	1939 (preliminary)		1913	1923	1929	1932	1936	1937	1938	1939 (preliminary)
Alaska	2	120	101	103	137	132	155	146	−5.8	(1)	0.02	0.02	0.03	0.03	0.03	0.05	0.04
Alabama	17,678	20,458	17,944	7,857	12,229	12,440	11,062	11,995	+8.4	3.69	3.62	3.35	2.54	2.78	2.79	3.17	3.05
Arkansas	2,234	1,297	1,695	1,033	1,623	1,511	1,197	2,300	−5.8	.47	.23	.32	.33	.37	.34	.34	.58
Oklahoma	4,166	2,885	3,774	1,255	1,540	1,600	1,245			.87	.51	.71	.41	.35	.36	.36	
Colorado	9,232	10,346	9,921	5,599	6,812	7,187	5,663	5,890	+4.0	1.93	1.83	1.85	1.81	1.55	1.61	1.63	1.50
Georgia	256	76	45	27	24	(2)	(2)	(2)	(2)	.05	.01	.01	.01	.01	(2)	(2)	(2)
North Carolina		36	52	2							.01	.01					
Illinois	61,619	79,310	60,658	33,475	50,927	51,602	41,912	46,450	+10.8	12.88	14.05	11.34	10.81	11.60	11.58	12.03	11.82
Indiana	17,166	26,229	18,344	13,324	17,822	17,765	14,759	16,650	+12.8	3.59	4.65	3.43	4.30	4.06	3.99	4.23	4.24
Iowa	7,526	5,711	4,241	3,862	3,961	3,637	3,103	3,050	−1.7	1.57	1.01	.79	1.25	.90	.82	.89	.78
Kansas	7,202	4,443	2,976	1,953	2,944	2,893	2,654	6,195	+1.7	1.51	.79	.56	.63	.67	.65	.76	1.58
Missouri	4,318	3,408	4,030	4,070	3,965	4,091	3,436			.90	.60	.75	1.31	.91	.92	.99	
Kentucky:																	
Eastern	11,099	33,887	46,025	25,780	39,152	38,523	31,177	34,730	+11.4	2.32	6.00	8.60	8.32	8.92	8.65	8.95	8.84
Western	8,518	10,890	14,437	9,540	8,370	8,563	7,368	8,075	+9.6	1.78	1.93	2.70	3.08	1.91	1.92	2.11	2.05
Maryland	4,780	2,296	2,649	1,429	1,704	1,549	1,281	1,468	+14.6	1.00	.40	.50	.46	.39	.35	.37	.37
Michigan	1,232	1,172	805	446	626	562	494	434	−12.1	.26	.21	.15	.14	.14	.13	.14	.11
Montana [3]	3,241	3,148	3,408	2,125	2,988	2,965	2,732	2,810	+2.9	.68	.56	.64	.69	.68	.67	.78	.71
New Mexico	3,709	2,915	2,623	1,263	1,597	1,715	1,239	1,206	−2.7	.78	.52	.49	.41	.36	.38	.36	.31
North Dakota [3]	495	1,386	1,862	1,740	2,215	2,251	2,050	2,089	+1.9	.10	.25	.35	.56	.50	.50	.59	.53
South Dakota [3]	11	11	13	49	41	47	48	50	+4.2	(1)	(1)	(1)	.02	.01	.01	.01	.01
Ohio	36,200	40,546	23,689	13,909	24,110	25,178	18,591	19,632	+5.6	7.57	7.18	4.43	4.49	5.49	5.65	5.33	4.99
Pennsylvania (bituminous)	173,781	171,880	143,516	74,776	109,887	111,002	77,705	92,190	+18.6	36.32	30.45	26.83	24.14	25.03	24.91	22.30	23.45
Tennessee	6,860	6,040	5,406	3,538	5,108	5,213	4,472	5,280	+18.1	1.43	1.07	1.01	1.14	1.16	1.17	1.28	1.34
Texas [3]	2,429	1,187	1,101	537	843	910	879	810	−7.8	.51	.21	.20	.21	.19	.20	.25	.21
Utah	3,255	4,730	5,161	2,852	3,247	3,810	2,947	3,340	+13.3	.68	.84	.97	.92	.74	.85	.85	.85
Virginia	8,828	11,762	12,748	7,692	11,662	13,795	12,283	13,230	+7.7	1.85	2.08	2.38	2.48	2.66	3.10	3.52	3.37
Washington	3,878	2,926	2,521	1,591	1,812	2,002	1,567	1,690	+7.8	.81	.52	.47	.51	.41	.45	.45	.43
West Virginia	71,254	107,900	138,519	85,609	117,926	118,646	93,288	107,938	+15.7	14.89	19.11	25.89	27.64	26.86	26.63	26.76	27.46
Wyoming	7,393	7,575	6,705	4,171	5,781	5,918	5,204	5,383	+3.4	1.55	1.34	1.25	1.35	1.32	1.33	1.49	1.37
Other States [4]	73	20	20	23	15	24	34	34		.01	(1)	(1)	.01	(1)	.01	.01	.01
Total bituminous	478,435	564,565	534,989	309,710	439,088	445,531	348,545	393,965	+12.8	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Pennsylvania anthracite	91,525	93,339	73,828	49,855	54,580	51,856	46,099	51,487	+11.7								
Grand total	569,960	657,904	608,817	359,565	493,668	497,387	394,644	444,552	+12.6								

[1] Less than 0.01.
[2] Included in "Other States."
[3] Lignite figures from Bureau of Mines.
[4] Includes Arizona, California, Georgia, Nebraska, Nevada, and Oregon. The States reporting are not identical from year to year.

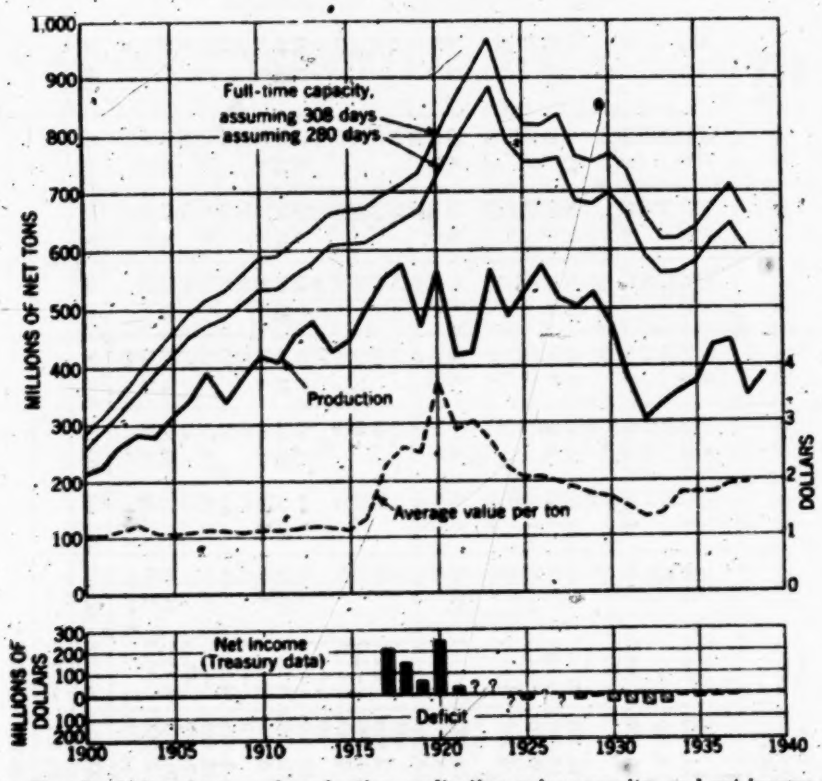

FIGURE 5.—Trends of bituminous-coal production, realization, mine capacity, and net income or deficit in the United States, 1900–39.

TABLE 4.—*Changes in the United States consumption of bituminous coal by such classes of consumers as report currently, and by all other consumers, 1929 and 1934–39, in thousands of net tons* [1]

[Information on several other classes of consumers is available for certain years. The items shown in this table are selected because they are available in strictly comparable form for each year]

Year	Consumed in the United States								Exported [3]		Total of consumption and exports [4]
	Colliery fuel	Electric power utilities [2]	Bunkers, foreign trade [3]	Locomotive fuel, class I roads [4]	Coke [5]		All other uses [6]	Total consumption [7]	To Canada and Mexico	To other countries (seaborne)	
					Beehive ovens	By-product ovens					
1929	4,663	44,937	4,287	113,894	10,028	76,759	264,987	519,555	14,727	2,702	536,984
1934	3,175	33,555	1,321	70,496	1,635	44,343	192,518	347,043	10,213	656	357,912
1935	3,103	34,807	1,576	71,335	1,469	49,046	198,956	360,292	9,044	698	370,034
1936	3,227	42,025	1,622	81,130	2,698	63,244	228,850	422,796	9,912	743	433,451
1937	3,052	44,766	1,832	82,667	4,927	69,575	221,678	428,497	12,052	1,093	441,642
1938	2,493	40,212	1,352	68,794	1,360	45,266	185,173	344,650	9,561	929	355,140
1939 [8]	2,810	46,223	1,477	73,833	2,298	61,216	190,122	377,979	9,976	1,614	389,569

[1] Comparable data for other earlier years in Minerals Yearbook, 1937, p. 799.
[2] Geological Survey and Federal Power Commission. Represents all coal consumed by public utility power plants in power generation, including a small amount of anthracite.
[3] Bureau of Foreign and Domestic Commerce.
[4] Interstate Commerce Commission. Represents bituminous coal consumed as locomotive fuel by class I steam railways, excluding switching and terminal companies.
[5] Bureau of Mines.
[6] Obtained by subtracting the known items from the calculated total consumption. Includes general manufacturing, domestic, and many miscellaneous uses.
[7] Production plus imports minus exports, plus or minus changes in consumers' stocks.
[8] Includes imports. [9] Subject to revision.

Trends in distribution of bituminous coal, 1923, 1929, 1934, 1936–39

[For details and sources of data see Monthly Report on Distribution of Coal Shipments; tonnage figures shown in thousands of net tons]

	1923		1929		1934		1936		1937		1938		1939 (preliminary)	
	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent
New England receipts:														
Via rail across the Hudson	9,634	41.9	6,781	31.9	5,422	31.6	5,078	28.8	4,885	27.5	4,104	29.2	4,626	28.5
Via tidewater from northern ports	3,703	16.1	1,570	7.4	1,089	6.3	755	4.3	364	2.0	125	.9	222	1.4
Via tidewater from southern ports	9,671	42.0	12,875	60.7	10,662	62.1	11,774	66.9	12,553	70.5	9,808	69.9	11,390	70.1
Total New England	23,008	100.0	21,226	100.0	17,173	100.0	17,607	100.0	17,802	100.0	14,037	100.0	16,238	100.0
Tidewater loadings:														
By ports:														
At New York and Philadelphia	14,693	39.2	12,226	32.1	9,120	31.7	9,203	29.7	9,683	29.2	8,565	31.1	9,404	28.9
At Baltimore, Hampton Roads, and Charleston	22,828	60.8	25,825	67.9	19,623	68.3	21,823	70.3	23,467	70.8	19,018	68.9	23,083	71.1
Total	37,521	100.0	38,051	100.0	28,743	100.0	31,026	100.0	33,150	100.0	27,583	100.0	32,487	100.0
By fields of origin:														
From Pennsylvania and northern West Virginia	19,760	52.7	15,516	40.8	10,647	37.1	11,344	36.6	11,859	35.8	10,394	37.7	12,165	37.4
From southern low-volatile fields	13,619	36.3	17,103	44.9	13,745	47.8	15,021	48.4	16,180	48.8	13,274	48.1	16,012	49.3
From southern high-volatile fields	4,142	11.0	5,432	14.3	4,351	15.1	4,661	15.0	5,111	15.4	3,915	14.2	4,310	13.3
Total	37,521	100.0	38,051	100.0	28,743	100.0	31,026	100.0	33,150	100.0	27,583	100.0	32,487	100.0
By destinations:														
To New England	13,374	35.6	14,445	38.0	11,751	40.9	12,530	40.4	12,916	39.0	9,933	36.0	11,612	35.7
Foreign	5,122	13.7	2,852	7.5	715	2.5	837	2.7	1,249	3.8	1,029	3.7	1,691	5.2
Bunkers	5,442	14.5	5,507	14.5	1,545	5.4	1,648	5.3	1,758	5.3	1,280	4.7	1,453	4.5
Inside capes and other tonnage	13,583	36.2	15,247	40.0	14,732	51.2	16,011	51.6	17,227	51.9	15,341	55.6	17,731	54.6
Total	37,521	100.0	38,051	100.0	28,743	100.0	31,026	100.0	33,150	100.0	27,583	100.0	32,487	100.0
Lake Erie loadings (cargo and fuel):														
By fields of origin:														
From Ohio	6,417	20.9	3,734	9.5	2,625	7.3	2,908	6.4	3,231	7.1	2,390	6.8	2,356	5.7
From Pittsburgh and other Pennsylvania	9,980	32.4	8,586	21.8	10,941	30.4	11,222	24.7	11,763	26.0	8,019	22.8	9,259	22.5
From Moundsville, Fairmont, and Cumberland-Piedmont	3,277	10.7	2,184	5.5	1,313	3.7	1,648	3.6	2,319	5.1	1,389	4.0	1,963	4.8
From southern West Virginia, high-volatile	4,994	16.2	10,233	26.0	7,779	21.6	10,459	23.0	10,975	24.3	8,329	23.7	10,883	26.5
From southern West Virginia, low-volatile	2,871	9.3	7,656	19.4	6,864	19.1	10,103	22.3	8,428	18.6	7,612	21.7	8,665	21.1
From east Kentucky, Tennessee, and Virginia	3,229	10.5	6,991	17.8	6,449	17.9	9,101	20.0	8,530	18.9	7,392	21.0	7,998	19.4
Total	30,768	100.0	39,384	100.0	35,971	100.0	45,441	100.0	45,246	100.0	35,131	100.0	41,124	100.0

TABLE 5.—*Trends in distribution of bituminous coal, 1923, 1929, 1934, 1936–39*—Continued

	1923		1929		1934		1936		1937		1938		1939 (preliminary)	
	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent
Lake Erie loadings (cargo and fuel)—Continued.														
By destinations (cargo only):														
To American points	24,172	81.5	31,943	84.2	28,399	81.5	37,184	84.5	35,123	80.6	27,656	80.9	33,188	83.3
To Canadian points	5,475	18.5	6,007	15.8	6,440	18.5	6,835	15.5	8,479	19.4	6,510	19.1	6,672	16.7
Total	29,647	100.0	37,950	100.0	34,839	100.0	44,019	100.0	43,602	100.0	34,166	100.0	39,860	100.0
Across Lake Michigan car ferry	1,373	.....	1,282	.....	680	.....	799	.....	650	.....	588	.....	592	.....
West-bound rail to Mississippi Valley (revenue all-rail shipments, excluding railroad fuel, Lake coal, and movement to Kentucky points):														
From Ohio fields	22,970	14.7	12,912	7.8	11,321	11.3	11,811	9.6	11,861	9.5	8,042	8.7	9,052	8.4
From Pennsylvania fields	15,853	10.1	21,885	13.3	12,125	12.1	15,593	12.6	15,091	12.1	9,629	10.4	12,200	11.4
From northern West Virginia and Cumberland-Piedmont	2,509	1.6	5,464	3.3	3,271	3.3	3,425	2.8	3,521	2.8	2,615	2.8	3,227	3.0
From southern West Virginia, high-volatile	17,525	11.2	25,148	15.3	13,800	13.8	17,641	14.3	17,293	13.9	13,668	14.8	15,099	14.0
From southern West Virginia, low-volatile	13,535	8.6	23,691	14.4	14,916	14.9	19,140	15.5	19,575	15.8	13,335	14.5	15,946	14.8
From east Kentucky, Tennessee, and Virginia	17,789	11.3	24,057	14.6	13,463	13.4	17,659	14.3	17,953	14.5	14,120	15.3	15,749	14.7
Total from Appalachian fields	90,181	57.5	113,157	68.7	68,896	68.8	85,269	69.1	85,294	68.6	61,400	66.5	71,273	66.3
From Illinois	48,401	30.9	34,863	21.2	20,208	20.2	26,362	21.4	26,625	21.4	20,719	22.5	24,879	23.1
From Indiana	14,549	9.3	10,589	6.4	8,879	8.8	9,822	8.0	10,594	8.5	8,501	9.2	9,455	8.8
From west Kentucky [1]	3,569	2.3	6,175	3.7	2,208	2.2	1,873	1.5	1,859	1.5	1,661	1.8	1,917	1.8
Total from Middle West fields	66,519	42.5	51,627	31.3	31,295	31.2	38,057	30.9	39,078	31.4	30,881	33.5	36,251	33.7
Grand total	156,700	100.0	164,784	100.0	100,191	100.0	123,326	100.0	124,372	100.0	92,281	100.0	107,524	100.0
Total shipments from other groups (all shipments including, in this case, nonrevenue railroad fuel): [2]														
From Michigan fields	1,086	[3].2	745	[3].1	325	[3].1	210	(4)	181	([3]4)	166	([3]9)	120	([3]4)
From upper Lake commercial docks, all deliveries	(5)	.....	16,689	[3]3.1	11,535	[3]3.2	13,768	[3]3.1	13,518	[3]3.1	10,845	[3]3.1	11,111	[3]2.9
From Iowa, Missouri, and Kansas	12,222	[3]2.2	9,488	[3]1.8	7,007	[3]1.9	7,647	[3]1.7	7,202	[3]1.6	6,528	[3]1.9	6,278	[3]1.6
From Arkansas, Oklahoma, and Texas	5,125	[3].9	6,337	[3]1.2	2,692	[3].7	3,784	[3].9	3,739	[3].8	3,126	[3].9	3,006	[3].8
From far western fields	30,286	[3]5.4	29,705	[3]5.6	16,368	[3]4.6	20,849	[3]4.7	21,867	[3]4.9	17,612	[3]5.1	18,432	[3]4.7
From Alabama field	19,569	[3]3.5	17,503	[3]3.3	8,812	[3]2.5	11,539	[3]2.6	11,771	[3]2.7	10,382	[3]3.0	11,075	[3]2.9

[1] The figures for west Kentucky cover in recent years a much smaller percentage of the field's production than do those for Illinois and Indiana and may not be fully comparable with earlier years.

[2] Excluding commercial sales by truck and wagon, except from upper Lake docks.

[3] Percent of total national shipments from all mines, all destinations.

[4] Less than 0.4 percent.

[5] Data not available.

SOURCES OF DATA AND ACKNOWLEDGMENTS

Bituminous-coal production statistics for 1939 are preliminary estimates based upon (1) weekly or monthly reports of railroad carloadings of coal and beehive coke by all the important carriers, (2) shipments by river as reported by the United States Army Engineers, (3) direct reports from a number of mining companies, and (4) monthly production statements compiled by various local operators' associations, including the following: Central Pennsylvania Coal Producers Association, Georges Creek and Upper Potomac Coal Association, Hazard Coal Operators Association, Kanawha Coal Operators Association, Eastern Ohio Operators Association, North Dakota Board of Railroad Commissioners, Utah Coal Operators Association, Virginia Operators Association, Winding Gulf Operators Association, and Operators Association of the Williamson Field. Especial acknowledgment for detailed monthly production reports is made to: Thomas Allen, Colorado inspector of coal mines; James McSherry, director, Illinois Department of Mines and Minerals; Jonas Waffle, managing director, Coal Trade Association of Indiana; J. I. Thomas, secretary, Pennsylvania Department of Mines; N. P. Rhinehart, chief, West Virginia Department of Mines; J. E. Bergin, chief inspector, Washington Department of Mines.

In the estimates for 1939 allowance has been made for commercial truck shipments, local sales and colliery fuel, and small trucking or wagon mines producing over 1,000 tons a year. Production of mines on the border between two States has been credited to the State from which the coal is extracted rather than that in which the tipple is situated. If the coal is mined from lands in both States the tonnage has been apportioned accordingly.

Valuable assistance was rendered in the preparation of this chapter by the following members of the research section of the Bituminous Coal Division: L. H. Barber, E. M. Hall, M. S. Kengla, and J. G. Kirby.

The data in this report on the output of bituminous coal in 1938 are based upon detailed annual reports of production and mine operation courteously furnished by the producers. As in previous years, all but a small percentage of the output was covered by the reports submitted. For the remaining output not directly reported, consisting chiefly of small mines, it has been possible to obtain data of reasonable accuracy from the records of the State mine departments, which have statutory authority to require such reports, or in a few instances, from railroad carloadings.

Acknowledgment is made to the many individuals and agencies both public and private that have cooperated generously in making the survey possible.

RELATIVE RATE OF GROWTH OF COAL, OIL, AND WATER POWER, 1889–1939

According to preliminary data, the total supply of available energy in the form of coal, oil and natural gas, and water power in 1939 was 24,415 trillion B. t. u., an increase of 7.2 percent over the preceding year. (See fig. 6.)

The figures are expressed in British thermal units, because some common denominator is necessary for such unlike quantities as tons

* Data not available.
* Less than 0.1 percent.
* Excluding commercial sales by truck and wagon, except from upper Lake docks.
* Percent of total national shipments from all mines, all destinations.

of coal, barrels of oil, and cubic feet of gas. Table 6 summarizes the equivalent of each of the fuels in British thermal units. Water power is represented by the equivalent fuel required to perform the same work. The table covers the years since 1933, but corresponding data are given in graphic form for the entire period back to 1890. Details for 1889 to 1932 are given in Minerals Yearbook, 1937, page 807.

In converting water power into its fuel equivalent, two alternative assumptions have been made. The first, as in previous issues of these tables, assumes a *constant* fuel equivalent of 4.02 pounds of coal for each kilowatt-hour of water power produced throughout the

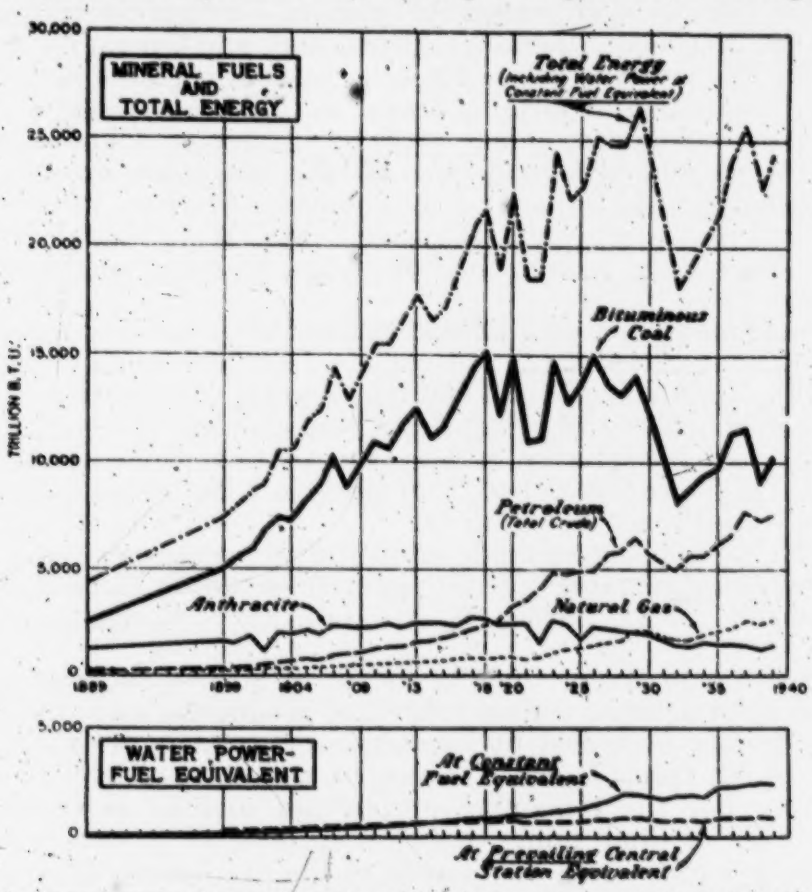

FIGURE 6.—Annual supply of energy from mineral fuels and water power in the United States, 1889–1939.

entire period from 1889 to 1939. This factor was selected because it represents, in round numbers, the average efficiency of all central stations generating steam-electric power in 1913, the midpoint of the period under review. The usefulness of the *constant* factor lies in showing the rate at which water power is being developed. It permits direct comparison between the relative increase in kilowatt-hours of water power and the corresponding increase (or decrease) in tons of coal, barrels of oil, or cubic feet of gas produced. On the other hand, the constant factor makes no allowance for the fact that coal and other fuels produced today are used more efficiently than formerly.

To throw light on the influence of improving fuel efficiency, a second computation of the energy equivalent of water power has therefore been made. This assumes a *prevailing* fuel equivalent, diminishing

year by year, which represents the average performance of all fuel-burning central electric stations for the year in question. This average has declined from about 7.05 pounds of coal per kilowatt-hour in 1899 to 1.39 pounds in 1939. (The *prevailing* factor is thus much above the *constant* factor in 1899 and much below it in 1939.) The *prevailing* fuel equivalent indicates more nearly the amount of fuel that would have been needed in any one year to generate the same power in a steam-electric station. It should be noted, however, that the ultimate uses to which the water power generated is put often displace fuel burned much less efficiently than in central stations and that in any instance no other important branch of fuel consumption has made advances in fuel efficiency approaching that of the central stations.

As these tables attempt to determine the total energy from all fuels and from water power, the ideal factor for converting water power into fuel equivalent would be the average efficiency of all forms of fuel consumption in each year. No basis for determining such an all-embracing average exists at present, but enough is known to make certain that it would show much less reduction from 1899 to 1939 than did the central stations. For the present, a just comparison of the changing contributions of water power and of fuel to the national energy supply would lie somewhere between the results shown by the *constant* equivalent and the *prevailing central-station* equivalent in these tables.

As in earlier issues of these tables, the figures for oil and natural gas represent the entire production of crude petroleum and of gas. Most of this production does not come into direct competition with coal. Much of the supply of both oil and gas is used in regions of the country, such as California and portions of the Southwest, where coal is available only at unusually high cost because of heavy transport charges. Nearly half of the natural gas is used in the field for drilling or operating oil and gas wells and pipe lines, or for the manufacture of carbon black. More than half the oil is used in the form of gasoline, kerosene, and lubricants, for which purposes coal cannot well compete, except at very much higher levels of oil prices. Even these refined products, however, involve a certain measure of indirect competition with coal, for the energy market of the country is becoming more fluid and competitive, and a demand that cannot be met by one source of supply tends to fall back on the others.

The subject of interfuel competition is exceedingly complex, and an elaborate analysis and the accumulation of data not now available would be required to determine even approximately how much of any one fuel actually has been displaced either by other fuels or by water power. The present tables do not permit determination of such displacement; their purpose is rather to measure the long-time trends in the total demand for energy.

The figures for anthracite represent the output from established operations only and do not include bootleg or stolen coal, the amount of which is not accurately known. The bootleg tonnage has been estimated by the Commonwealth of Pennsylvania Anthracite Coal Industry Commission at the rate of 2,400,000 tons a year during 1936 and 1937, which is equivalent to 5 percent of the output of the legitimate operations. (Trade estimates place the figure as high as 3,000,000 to 3,500,000 tons.) The Pennsylvania Department of Mines estimates the bootleg tonnage at 2,500,000 tons in 1938 and 3,500,000

in 1939. If the additional item of 2,500,000 tons were included, the total energy from anthracite in 1938 would be 1,323 trillion B. t. u. and the total energy from all sources 22,833 trillion B. t. u. If the additional item of 3,500,000 tons were included, the total energy from anthracite in 1939 would be 1,492 trillion B. t. u. and the total energy from all sources 24,510 trillion B. t. u.

Table 7 compares the relative increase in the several sources of energy by means of index numbers in which production for 1918 is represented by 100. Production of anthracite in 1939 was 48 percent below 1918 (44 percent if bootleg coal is included) and of bituminous coal 33 percent below 1918. Production of domestic petroleum increased 255 percent and natural gas 238 percent over 1918.

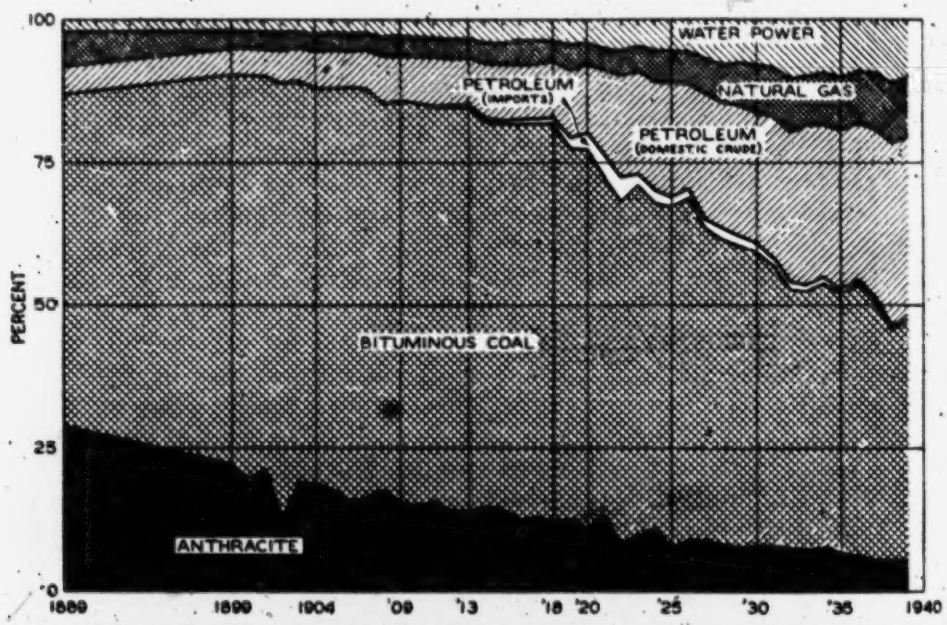

FIGURE 7.—Percent of total B. t. u. equivalent contributed by the several sources of energy, counting water power at constant fuel equivalent, 1889–1939. If water power is counted at the prevailing fuel equivalent of central stations in each year, its proportion is 3.2 percent in 1899 and 3.7 percent in 1939, and the proportions of the other sources of energy are affected accordingly.

There was a 189-percent increase in the amount of water power developed (represented by the constant fuel equivalent).

Table 8 gives the percentage composition of the total energy supply, on the alternative assumptions of water power at constant and at prevailing central-station equivalents in fuel. On the assumption of constant equivalent, the proportion contributed by water power has increased from 1.8 percent in 1899 to 9.9 in 1939. On the assumption of prevailing central-station equivalent, it has remained substantially unchanged at 3 to 4 percent. As already noted, the truth lies somewhere between the two assumptions. Upon either basis, water power furnishes a relatively small fraction of the total energy budget of the Nation, although, of course, a much larger fraction of the electric power produced by public utilities.

Coal remained the largest source of energy in 1939, contributing 47.5 percent with water power counted at constant fuel equivalent and 50.7 percent with water power at prevailing central-station equivalent.

TABLE 6.—*Annual supply of energy from mineral fuels and water power in the United States, 1933–39,[1] in trillions of B. t. u.[2]*

Year	Pennsylvania anthracite	Bituminous coal	Total coal	Petroleum (total crude, including that refined)		Natural gas (total production)	Total petroleum and natural gas	Total mineral fuels	Water power (fuel equivalent)		Grand total energy	
				Domestic production	Imports				At constant fuel equivalent [3]	At prevailing central station equivalent [4]	Water power at constant fuel equivalent	Water power at prevailing central station equivalent
1933	1,348	8,741	10,089	5,434	191	1,672	7,297	17,386	1,931	711	19,317	18,097
1934	1,555	9,415	10,970	5,448	213	1,904	7,565	18,535	1,896	698	20,431	19,233
1935	1,419	9,756	11,175	5,980	193	2,060	8,233	19,408	2,207	806	21,615	20,214
1936	[5] 1,485	11,504	12,989	6,598	194	2,330	9,122	22,111	2,256	812	24,367	22,923
1937	[5] 1,410	11,673	13,083	7,675	165	2,588	10,428	23,511	2,446	871	25,957	24,382
1938	[5] 1,255	9,132	10,387	7,286	158	2,468	9,912	20,299	2,466	866	22,765	21,165
1939 [6]	[5] 1,397	10,192	11,589	7,586	199	2,618	10,403	21,992	2,423	838	24,415	22,830

[1] Comparable data for earlier years in Minerals Y earbook, 1937, p. 807.

[2] The unit heat values employed are: Anthracite, 13,600 B. t. u. per pound; bituminous coal, 13,100 B. t. u. per pound; petroleum, 6,000,000 B. t. u. per barrel; natural gas, 1,075 B. t. u. per cubic foot. Water power includes installations owned by manufacturing plants and mines, as well as Government and privately owned public utilities. The fuel equivalent of water power is calculated from the kilowatt-hours of power produced wherever available, as is true of all public utility plants since 1919. Otherwise the fuel equivalent is calculated from the reported horsepower of installed water wheels assuming a capacity factor of 20 percent for manufactures and mines and of 40 percent for public utilities.

[3] Assuming 4.02 pounds per kilowatt-hour, which is the average of central electric station practice in 1913, the midpoint of the period for which data are available.

[4] Assuming the average central-station practice for each of the years for which data are available, which declined from about 7.05 pounds per kilowatt-hour in 1899 to 1.39 pounds in 1939.

[5] Does not include an unknown amount of bootleg or stolen coal. If this were included, the energy for anthracite would be approximately 1,550 trillion B. t. u. in 1936, 1,476 in 1937, 1323 in 1938, and 1,492 in 1939, and the total energy would be increased accordingly.

[6] Subject to revision.

TABLE 7.—*Index numbers for relative rate of growth of coal, oil, and water power in the United States* [1]

[The figures are expressed as a percentage of the 1918 rate]

Year	Pennsylvania anthracite	Bituminous coal	Total coal	Petroleum (total crude)		Natural gas (total production)	Total petroleum and natural gas	Total mineral fuels	Water power (at constant fuel equivalent)	Grand total	
				Domestic production	Imports					With water power at constant fuel equivalent	With water power at prevailing central station equivalent
1933	50	57	56	252	90	205	229	82	231	87	83
1934	58	62	61	255	94	246	241	88	227	94	89
1935	53	64	63	280	85	266	262	92	264	99	93
1936	55	76	73	309	86	301	291	105	270	112	106
1937	[2] 52	77	73	359	73	334	332	112	292	119	112
1938	[2] 47	60	58	341	70	318	316	97	295	104	98
1939 [3]	[2] 52	67	65	355	88	338	332	105	289	112	105

[1] Comparable data for earlier years in Minerals Yearbook, 1937, p. 809.

[2] If illicit or bootleg anthracite were included, the index for 1937 would be 55, that for 1938, 49, and for 1939, 56.

[3] Subject to revision.

TABLE 8.—*Percent of total B. t. u. equivalent contributed by the several mineral fuels and water power in the United States, 1933–39* [1]

Year	Pennsylvania anthracite	Bituminous coal	Total coal	Petroleum (total crude)		Natural gas (total production)	Total petroleum and natural gas	Total mineral fuels	Water power, fuel equivalent	Grand total, including water power
				Domestic production	Imports					
	Water power counted at *constant* fuel equivalent of approximately 4 lb. per kilowatt-hour									
1933	7.0	45.2	52.2	28.1	1.0	8.7	37.8	90.0	10.0	100.0
1934	7.6	46.1	53.7	26.7	1.0	9.3	37.0	90.7	9.3	100.0
1935	6.6	45.1	51.7	27.7	.9	9.5	38.1	89.8	10.2	100.0
1936	6.1	47.2	53.3	27.1	.8	9.5	37.4	90.7	9.3	100.0
1937	[2] 5.4	45.0	50.4	29.6	.6	10.0	40.2	90.6	9.4	100.0
1938	[2] 5.5	40.1	45.6	32.0	.7	10.8	43.5	89.1	10.9	100.0
1939 [3]	[2] 5.7	41.8	47.5	31.1	.8	10.7	42.6	90.1	9.9	100.0
	Water power counted at *prevailing* central station equivalent for year									
1933	7.4	48.4	55.8	30.0	1.1	9.2	40.3	96.1	3.9	100.0
1934	8.1	49.0	57.1	28.3	1.1	9.9	39.3	96.4	3.6	100.0
1935	7.0	48.3	55.3	29.5	1.0	10.2	40.7	96.0	4.0	100.0
1936	6.5	50.2	56.7	28.8	.8	10.2	39.8	96.5	3.5	100.0
1937	[2] 5.8	47.8	53.6	31.5	.7	10.6	42.8	96.4	3.6	100.0
1938	[2] 5.9	43.2	49.1	34.4	.7	11.7	46.8	95.9	4.1	100.0
1939 [3]	[2] 6.1	44.6	50.7	33.2	.9	11.5	45.6	96.3	3.7	100.0

[1] Comparable data for earlier years in Minerals Yearbook, 1937, p. 810.
[2] If bootleg coal were included the proportion from anthracite would be 5.7 percent in 1937, 5.8 in 1938, and 6.1 in 1939 at *constant* and 6.0 in 1937, 6.2 in 1938, and 6.5 in 1939 at *prevailing* water power equivalents.
[3] Subject to revision.

FINAL BITUMINOUS STATISTICS FOR 1938

Tables 9 to 34 give the final detailed statistics of bituminous mine operations in 1938. The subjects covered include production, number and size of mines, employment, fuel economy, stocks, foreign trade, and world production.

In accordance with the practice followed by the Bureau of Mines in previous years the statistics in this report relate to mines having an output of 1,000 tons a year or more and do not attempt to include many small mines producing less than 1,000 tons per year that sell their output by wagon or truck. Unless otherwise indicated, the net or short ton of 2,000 pounds has been used as a standard unit of measurement.

These statistics include for convenience and historical comparison the small output of anthracite and semianthracite produced outside Pennsylvania and the production of lignite. Details regarding these coals are given in tables 26 to 34, inclusive. In the standard statistics of the American coal trade they have ordinarily been combined with bituminous coal.

PRODUCTION

SUMMARY BY STATES

TABLE 9.—*Production, men employed, days operated, man-days of labor, and output per man per day at coal mines in the United States in 1938, by States*

[Exclusive of product of wagon mines producing less than 1,000 tons]

State	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines [1]	Total quantity	Underground	Surface: In strip pits	Surface: All others	Total			
Alabama	10,355,746	539,048	109,524	57,175	11,061,493	18,339	91	2,680	21,110	180	3,795,822	2.91
Alaska	151,656		231	2,795	154,682	100		44	144	204	29,413	5.26
Arizona, Georgia, Idaho, and Oregon	25,636	8,357	50		34,043	82		17	99	122	12,059	2.82
Arkansas	1,167,240	20,678	1,723	7,406	1,197,047	3,215	65	541	3,821	112	429,619	2.79
Colorado	3,899,117	1,468,725	90,636	[1] 204,666	5,663,144	6,897	10	1,378	8,285	169	1,400,088	4.04
Illinois	34,562,842	6,281,452	302,201	703,890	41,912,085	29,217	1,698	7,448	38,363	149	5,704,535	7.35
Indiana	12,483,953	1,813,808	309,599	151,124	14,758,484	6,244	1,935	2,350	10,529	149	1,570,984	9.40
Iowa	1,642,445	1,412,311	31,853	16,578	3,103,187	6,234	322	816	7,372	136	1,000,795	3.10
Kansas	2,390,839	246,435	6,266	10,601	2,654,141	1,861	680	545	3,086	170	525,115	5.05
Kentucky	36,910,512	1,039,787	450,115	144,804	38,545,218	45,096	60	7,007	52,163	160	8,351,492	4.62
Maryland	1,050,827	214,817	8,648	7,121	1,281,413	2,083		288	2,371	171	405,209	3.16
Michigan	166,143	292,572	8,978	26,788	494,481	1,099		106	1,205	163	195,825	2.53
Missouri	2,494,752	888,002	24,452	28,912	3,436,118	3,677	750	786	5,213	151	787,220	4.36
Montana [2]	2,524,145	191,291	13,000	3,614	2,732,050	1,126	40	359	1,525	174	265,784	10.28
New Mexico	1,103,772	87,099	13,570	34,587	1,239,037	1,968		506	2,474	153	378,011	3.28
North Dakota [2]	1,465,374	416,904	160,075	7,746	2,050,099	667	344	359	1,370	174	237,751	8.62
Ohio	14,848,698	3,311,408	328,913	101,599	18,590,618	23,306	920	3,167	27,393	145	3,984,353	4.67
Oklahoma	1,124,858	103,575	2,805	13,494	1,244,732	1,756	200	373	2,329	139	323,471	3.85
Pennsylvania	68,757,016	4,768,568	2,890,374	[1] 1,288,579	77,704,537	99,067	613	13,819	113,499	156	17,679,250	4.40
South Dakota [2]	27,148	20,570	340		48,058	18	23	9	50	170	8,507	5.65
Tennessee	4,060,006	320,884	50,835	[1] 40,678	4,472,403	7,094	4	1,168	8,266	167	1,383,487	3.23
Texas [2]	833,509	28,892	6,287	9,997	878,685	645	22	109	776	195	151,050	5.82
Utah	2,591,922	314,075	18,942	[1] 22,012	2,946,951	2,338		738	3,076	156	479,733	6.14
Virginia	11,726,660	220,247	72,457	[1] 263,672	12,283,036	14,559		2,202	16,761	174	2,918,100	4.21
Washington	1,149,909	383,249	13,881	19,934	1,566,973	1,990		601	2,591	163	423,119	3.70
West Virginia	89,873,390	985,303	1,849,829	[1] 579,650	93,288,172	87,852	56	15,131	103,039	175	18,082,703	5.16
Wyoming	4,850,881	214,001	33,524	105,471	5,203,877	3,474	44	905	4,423	181	801,879	6.49
	312,238,996	25,592,058	6,860,817	[1] 3,852,893	348,544,764	370,004	7,877	63,452	441,333	162	71,325,374	4.89

[1] Includes coal made into beehive coke at mines in the following States in 1938: Colorado, 84,172; Pennsylvania, 765,253; Tennessee, 10,000; Utah, 15,667; Virginia, 234,765; and West Virginia, 250,019; grand total, 1,359,876 tons.

[2] Includes figures on lignite compiled by L. Mann, Bureau of Mines; see lignite tables, 1938.

TOTAL PRODUCTION SINCE BEGINNING OF MINING

TABLE 10.—*Coal produced, by States, 1928–38, with production of maximum year and cumulative production from the earliest record to the end of 1938, in thousands of net tons*

State	Maximum production		Production by years											Total production from earliest record to end of 1938
	Year	Quantity	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	
Alabama	1926	21,001	17,621	17,944	15,570	11,999	7,857	8,760	9,142	8,505	12,229	12,440	11,062	639,028
Arkansas	1907	2,670	1,661	1,695	1,533	1,154	1,033	883	857	1,133	1,623	1,511	1,197	73,541
Colorado	1917	12,483	9,848	9,921	8,197	6,604	5,599	5,230	5,211	5,911	6,812	7,187	5,663	396,922
Georgia	1903	416	58	45	7	22	27	41	33	(1)	(1)	(1)	(1)	(1)
Illinois	1918	89,291	55,948	60,656	53,731	44,303	33,475	37,413	41,272	44,525	50,927	51,602	41,912	2,447,803
Indiana	1918	30,679	16,379	18,344	16,490	14,295	13,324	13,761	14,794	15,754	17,822	17,765	14,759	735,849
Iowa	1917	8,966	3,684	4,241	3,893	3,388	3,862	3,195	3,367	3,650	3,961	3,637	3,103	311,842
Kansas	1918	7,562	2,810	2,976	2,430	1,987	1,953	2,218	2,508	2,686	2,944	2,893	2,654	231,718
Kentucky	1927	69,124	61,860	60,463	51,209	39,964	35,300	36,100	38,525	40,761	47,522	47,086	38,545	1,248,514
Maryland	1907	5,533	2,687	2,649	2,271	2,006	1,429	1,531	1,627	1,678	1,704	1,549	1,281	241,228
Michigan	1907	2,036	617	805	661	359	446	407	622	628	626	562	494	44,410
Missouri	1917	5,671	3,733	4,030	3,858	3,621	4,070	3,432	3,352	3,646	3,985	4,091	3,436	215,722
Montana	1918	4,533	3,324	3,408	3,022	2,378	2,125	2,152	2,566	2,759	2,988	2,965	2,732	117,800
New Mexico	1918	4,023	2,712	2,623	1,969	1,553	1,263	1,226	1,259	1,389	1,597	1,715	1,239	106,009
North Carolina	1922	79	61	52	29	2	2	2	3	(1)	(1)	(1)		(1)
North Dakota	1936	2,215	1,650	1,862	1,700	1,519	1,740	1,782	1,754	1,956	2,215	2,251	2,650	39,873
Ohio	1920	45,878	15,641	23,689	22,552	20,411	13,909	19,589	20,691	21,153	24,110	25,178	18,591	1,354,138
Oklahoma	1920	4,849	3,501	3,774	2,794	1,908	1,255	1,238	1,208	1,229	1,540	1,600	1,245	130,275
Pennsylvania bituminous	1918	178,551	131,202	143,516	124,463	97,659	74,776	79,296	89,826	91,405	109,887	111,002	77,705	5,965,891
Tennessee	1910	7,121	5,611	5,405	5,130	4,721	3,538	3,775	4,136	4,138	5,108	5,213	4,472	254,669
Texas	1913	2,429	1,182	1,101	834	716	637	822	759	758	843	910	879	58,242
Utah	1920	6,005	4,843	5,161	4,258	3,350	2,852	2,675	2,406	2,947	3,247	3,810	2,947	134,551
Virginia	1926	14,133	11,901	12,748	10,907	9,699	7,692	8,179	9,377	9,667	11,662	13,795	12,283	361,357
Washington	1918	4,082	2,520	2,521	2,302	1,846	1,591	1,394	1,383	1,559	1,812	2,002	1,567	126,678
West Virginia	1927	145,122	132,952	138,519	121,473	101,473	85,609	94,344	98,134	99,179	117,926	118,646	93,288	3,343,619
Wyoming	1920	9,630	6,572	6,705	5,088	4,994	4,171	4,013	4,368	5,177	5,781	5,918	5,204	280,860
Other States			167	134	160	158	175	173	188	180	217	203	237	61,695
Total bituminous			500,745	534,989	467,526	382,089	309,710	333,631	359,368	372,373	439,088	445,531	348,545	18,922,234
Pennsylvania anthracite	1917	99,612	75,348	73,828	69,385	59,646	49,855	49,541	57,168	52,159	54,580	51,856	46,099	4,282,457
Grand total			576,093	608,817	536,911	441,735	359,565	383,172	416,536	424,532	493,668	497,387	394,644	23,204,691

[1] Included under "Other States."

PRODUCTION BY WEEKS AND MONTHS

The following tables summarize the statistics of weekly and monthly production of bituminous coal first published in the Bituminous Coal Division Weekly Coal Reports. The figures are estimates based on daily and weekly statements of cars of coal and beehive coke loaded by the principal railroads and of shipments over the more important originating rivers. The estimates are revised afterward to agree with the results of the annual statistical reports from the coal producers; therefore, the figures given here differ slightly from those issued originally in the weekly reports.

For the method used in counting holidays, see chapter on Coal in Mineral Resources of the United States, 1930, page 631.

TABLE 11.—*Estimated weekly production of bituminous coal in 1938*

Week ended	Production (net tons)	Number of working days	Average production per working day (net tons)	Week ended	Production (net tons)	Number of working days	Average production per working day (net tons)
Jan. 1	[1] 50,000	[1] 0.1	[2] 1,221,000	July 9	4,767,000	5	953,000
Jan. 8	6,842,000	6	1,140,000	July 16	5,829,000	6	972,000
Jan. 15	7,750,000	6	1,292,000	July 23	5,914,000	6	986,000
Jan. 22	7,456,000	6	1,243,000	July 30	6,010,000	6	1,002,000
Jan. 29	7,938,000	6	1,323,000	Aug. 6	5,931,000	6	989,000
Feb. 5	7,850,000	6	1,308,000	Aug. 13	6,120,000	6	1,020,000
Feb. 12	6,982,000	6	1,164,000	Aug. 20	6,395,000	6	1,066,000
Feb. 19	6,751,000	6	1,125,000	Aug. 27	6,611,000	6	1,102,000
Feb. 26	6,608,000	5.8	1,139,000	Sept. 3	7,034,000	6	1,172,000
Mar. 5	6,544,000	6	1,091,000	Sept. 10	6,612,000	5	1,322,000
Mar. 12	6,564,000	6	1,094,000	Sept. 17	7,523,000	6	1,254,000
Mar. 19	5,936,000	6	989,000	Sept. 24	8,059,000	6	1,343,000
Mar. 26	5,441,000	6	907,000	Oct. 1	8,100,000	6	1,350,000
Apr. 2	4,639,000	5.2	892,000	Oct. 8	8,140,000	6	1,357,000
Apr. 9	5,714,000	6	952,000	Oct. 15	8,443,000	6	1,407,000
Apr. 16	5,466,000	6	911,000	Oct. 22	8,287,000	6	1,381,000
Apr. 23	5,131,000	6	855,000	Oct. 29	8,802,000	6	1,467,000
Apr. 30	5,105,000	6	851,000	Nov. 5	8,233,000	6	1,372,000
May 7	4,763,000	6	794,000	Nov. 12	8,297,000	5.6	1,482,000
May 14	5,118,000	6	853,000	Nov. 19	8,582,000	6	1,430,000
May 21	5,052,000	6	842,000	Nov. 26	7,895,000	5	1,579,000
May 28	5,434,000	6	906,000	Dec. 3	8,831,000	6	1,472,000
June 4	4,772,000	5.3	900,000	Dec. 10	8,414,000	6	1,402,000
June 11	5,028,000	6	838,000	Dec. 17	8,348,000	6	1,391,000
June 18	5,138,000	6	856,000	Dec. 24	8,610,000	6	1,435,000
June 25	5,197,000	6	866,000	Dec. 31	8,111,000	5	1,622,000
July 2	5,378,000	6	896,000				
					348,545,000	306.0	1,139,000

[1] Figures represent output and number of working days in that part of the week included in the calendar year shown. Total production for the week of January 1, 1938, was 6,225,000 net tons.

[2] Average daily production for the entire week and not for the working days in the calendar year shown.

[1] Included under "Other States."

TABLE 12.—*Monthly production of coal in 1938, by States, in thousands of net tons*

The totals for the year are based upon final complete returns to the Bituminous Coal Division from all operators known to have produced more than 1,000 tons a year. The apportionment of the known yearly total among the 12 months is based upon the best information available, in some States upon direct tonnage reports by operators to the State mine department, in most cases upon current records of railroad carloadings and waterway shipments.]

State	January	February	March	April	May	June	July	August	September	October	November	December	Total
Alabama	980	998	1,003	890	745	652	674	840	896	1,046	1,098	1,240	11,062
Alaska	12	10	14	12	16	14	11	12	13	15	13	13	155
Arkansas	153	98	38	24	23	34	63	133	163	149	163	156	1,197
Colorado	625	548	439	353	265	274	250	330	522	553	754	750	5,663
Illinois	4,672	3,809	3,152	2,470	2,210	2,432	2,522	3,100	3,778	4,084	4,513	5,175	41,912
Indiana	1,474	1,445	1,286	960	840	896	898	1,060	1,226	1,328	1,520	1,826	14,759
Iowa	368	294	270	197	193	181	160	202	250	298	342	348	3,103
Kansas	338	272	190	158	116	157	143	224	266	250	232	308	2,654
Kentucky:													
Eastern	2,570	2,048	1,980	1,875	2,220	2,250	2,468	2,998	3,222	3,393	3,113	3,040	31,177
Western	802	635	579	429	417	398	444	568	717	722	766	891	7,368
Maryland	109	114	110	84	80	92	93	110	117	115	122	135	1,281
Michigan	70	60	62	27	15	15	13	18	46	52	56	60	494
Missouri	413	360	252	212	174	200	192	253	280	302	375	423	3,436
Montana	286	233	192	149	154	162	168	195	214	314	347	318	2,732
New Mexico	109	97	88	82	81	100	86	100	96	125	144	131	1,239
North Dakota	264	238	125	79	69	57	55	81	161	318	341	262	2,050
Ohio	1,618	1,403	1,538	1,259	1,160	1,242	1,274	1,540	1,692	1,988	1,950	1,918	18,591
Oklahoma	164	117	52	35	33	50	50	105	155	148	165	171	1,245
Pennsylvania bituminous	6,688	6,036	6,595	5,023	4,987	5,140	5,325	6,436	7,196	7,963	8,204	8,112	77,705
South Dakota	6	6	2	2	1	1	1	1	3	10	9	6	48
Tennessee	364	380	303	312	343	309	287	385	450	470	434	435	4,472
Texas	71	67	66	67	68	73	77	82	83	78	73	74	879
Utah	280	243	208	154	128	108	116	203	298	348	413	448	2,947
Virginia	923	935	934	744	821	864	920	1,207	1,220	1,298	1,217	1,200	12,283
Washington	142	124	116	90	92	93	95	145	144	165	182	179	1,567
West Virginia	7,574	6,979	7,277	6,019	6,170	6,801	7,073	8,253	9,095	9,627	9,419	9,001	93,288
Wyoming	456	373	405	318	317	302	304	439	468	577	642	603	5,204
Other States[1]	4	3	4	3	1	1	1	1	3	4	4	5	34
Total bituminous coal	31,535	27,925	27,280	22,027	21,739	22,898	23,763	29,030	32,769	35,740	36,611	37,228	348,545
Pennsylvania anthracite[2]	5,019	4,169	3,652	5,367	5,141	3,577	2,951	3,883	4,840	4,985	3,989	3,914	51,487
Grand total	36,554	32,094	30,932	27,394	26,880	26,475	26,714	32,913	37,609	40,725	40,600	41,142	400,032

[1] Arizona, Georgia, Idaho, and Oregon.
[2] Pennsylvania anthracite figures from Bureau of Mines. Includes Sullivan County, washery and dredge coal, local sales, colliery fuel, and coal shipped by truck from authorized operations.

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TABLE 13.—*Number and production of commercial bituminous-coal mines in the United States in 1938, classified by size of output in each State*

[Exclusive of product of truck and wagon mines producing less than 1,000 tons]

State	Class 1A, over 500,000 net tons		Class 1B, 200,000–500,000 net tons		Class 2, 100,000–200,000 net tons		Class 3, 50,000–100,000 net tons		Class 4, 10,000–50,000 net tons		Class 5, less than 10,000 net tons		Total all classes	
	Number of mines	Quantity	Number of mines	Quantity	Number of mines	Quantity	Number of mines	Quantity	Number of mines	Quantity	Number of mines	Quantity	Number of mines	Quantity
Alabama	4	2,708,945	12	3,927,901	13	1,810,192	23	1,594,784	22	567,250	156	452,421	230	11,061,493
Alaska							1	95,509	2	57,557	3	1,616	6	154,682
Arkansas							4	266,941	33	795,431	32	134,675	69	1,197,047
Colorado			1	243,293	18	2,630,985	16	1,213,571	51	1,160,684	126	414,611	212	5,663,144
Illinois	24	19,072,209	40	14,062,567	21	2,973,303	31	2,023,073	121	2,686,427	327	1,094,506	564	41,912,085
Indiana	6	4,027,318	18	5,720,356	11	1,629,174	19	1,330,775	63	1,358,916	184	691,945	301	14,758,484
Iowa			3	885,859			6	406,424	53	1,158,606	199	652,298	261	3,103,187
Kansas			5	1,324,621	6	745,996	1	73,859	12	234,441	81	275,224	105	2,654,141
Kentucky:														
Eastern	9	7,376,634	42	11,894,402	45	6,321,040	47	3,626,680	55	1,661,900	95	296,815	293	31,177,472
Western	1	549,915	9	2,533,029	17	2,300,308	16	1,158,421	23	568,552	83	257,521	149	7,367,746
Maryland					3	469,900	3	181,248	20	463,081	56	167,184	82	1,281,413
Michigan					1	165,449	2	150,083	8	178,949			11	494,481
Missouri	1	500,146	3	1,014,350	2	303,766	5	340,706	37	815,359	138	461,791	186	3,436,118
Montana, North Dakota, South Dakota, and Texas [1]	1	1,099,106	7	2,606,224	5	762,901	4	265,723	23	470,861	230	504,077	270	5,708,892
New Mexico			2	520,302	2	256,110	2	166,353	9	221,559	24	74,713	39	1,239,037
Ohio	10	6,866,673	14	4,247,302	18	2,448,344	22	1,625,480	88	2,000,619	447	1,402,200	599	18,590,618
Oklahoma			1	237,548	1	122,036	3	179,678	21	517,587	67	187,883	93	1,244,732
Pennsylvania	39	29,657,898	77	24,783,891	68	9,638,978	85	6,224,830	220	4,893,773	701	2,505,167	1,190	77,704,537
Tennessee			4	1,043,107	13	1,863,673	10	792,386	24	573,203	68	200,034	119	4,472,403
Utah			3	1,119,227	6	814,005	8	708,843	9	185,250	32	119,626	58	2,946,951
Virginia	4	2,728,708	15	5,206,706	20	2,796,668	12	917,361	12	355,423	63	278,170	126	12,283,036
Washington			1	212,268	5	762,261	2	133,806	16	354,144	29	104,494	53	1,566,973
West Virginia	39	27,978,480	129	37,725,893	119	17,183,094	91	6,694,233	107	3,034,307	215	672,165	691	93,288,172
Wyoming	1	544,241	10	3,002,439	8	1,076,620	2	108,051	12	368,845	32	103,681	65	5,203,877
Other States [2]									1	25,636	4	8,407	5	34,043
	139	103,110,273	387	122,311,286	402	57,074,803	415	30,278,318	1,042	24,708,360	3,392	11,061,224	5,377	348,544,764

[1] Includes lignite figures from Bureau of Mines.

[2] Arizona, Georgia, Idaho, and Oregon.

TREND OF AVERAGE VALUE PER TON, F. O. B. MINES, 1929 TO 1938

Before the Bituminous Coal Act of 1937 was passed the most valuable single index of the trend of prices at the mines was the "average value per ton, f. o. b. mines," as given in the familiar annual coal reports of the Bureau of Mines, United States Department of the Interior. This series was referred to in the Bureau of Mines reports as representing "bituminous coal," and it covered all coal other than Pennsylvania anthracite produced in the United States. It represented the bituminous-coal industry as the term ordinarily was used in the trade and included the lignite of the Dakotas, Texas, and Montana, as well as any small tonnages of hard coal produced outside of Pennsylvania.

With the passage of the Coal Act the Bureau of Mines relinquished the collection of statistics relating to bitumonous coal, effective June 30, 1937, though continuing to compile data regarding lignite. Effective on the same date, the Coal Commission became responsible for the compilation of data on bituminous coal, though not attempting to collect data regarding lignite, which was specifically exempted by the act. The records of the Commission (now Bituminous Coal Division, United States Department of the Interior), relate to all coal other than Pennsylvania anthracite and lignite, no exemptions other than lignite having been approved under the act.

To permit comparison of the old and new series, therefore, it is necessary to separate the lignites from the bituminous coals, though for convenience of the student the combined average for the two is continued in a form as nearly comparable as possible to the old series.

A more important change in the two series relates to the treatment of selling expenses. The old Bureau of Mines series of "value at the mines" excluded the selling cost. The reporting operator was asked to state the "Amount received at the mines f. o. b. cars less the selling expense." No details were asked regarding the items included in the value, and no systematic effort was made to follow up the exclusion of selling expenses. It was realized at the time that some producers might find it impractical to exclude selling costs and that some part of the selling expenses of the industry might be included in the results. Nevertheless, the reports were checked for consistency from year to year, the questions were retained in the same form without change, and the results are believed to have been comparable from one year to the next. The new series of the Coal Commission represents the total or gross realization on all coal produced and specifically includes the selling cost.

It is also possible that the two sets of data are not precisely comparable with respect to coal produced but not sold on the commercial market. In the Bureau of Mines series the reporting operator was instructed that the "value of coal not sold but used by producer, also mine fuel and coal made into coke should be estimated at average prices that might have been received." The instructions of the Coal Commission regarding such items were in effect similar, though given in greater detail.

A comparison of the two series is possible for 1936. In that year the average value per ton on the old (Bureau of Mines) basis amounted

to $1.761 per ton for bituminous coal excluding lignite. The average gross realization, as collected by the Coal Commission, was $1.831 per ton. The difference amounts to $0.07 per ton, an amount somewhat less than the average selling expenditure computed per ton of all coal produced, as reported to the Coal Commission. The comparison confirms previous indications that the great majority of operators reporting in earlier years had followed instructions and omitted selling expenses in computing the average value but that some of them had included the selling expense. The change in method of reporting should be kept in mind in comparing the two sets of data. As the reports to the Commission were submitted on a detailed accounting return and made under oath they are to be accepted. The returns of earlier years, on a voluntary basis and not in all instances uniform as to treatment of selling costs, seem to have been thoroughly comparable from one year to the next and afford the best available index to the rise and fall of the mine prices received by the operator down to 1936.

TABLE 14.—*Trend of average value of bituminous coal and lignite per ton, f. o. b. mines, 1929–38*

Year	Bituminous[1] coal (subject to regulation under 1937 Act)	Lignite[2]	Total
Average value per ton less selling expense (Bureau of Mines series):			
1929	$1.782	$1.548	$1.781
1930	1.702	1.556	1.701
1931	1.542	1.410	1.541
1932	1.313	1.313	1.313
1933	1.337	1.188	1.336
1934	1.751	1.387	1.749
1935	1.772	1.420	1.767
1936	1.761	1.061	1.756
Average gross realization including selling expense (Coal Commission series):			
1936	1.831	[3] 1.061	1.826
1937	1.946	[3] 1.080	1.939
1938	1.955	[3] 1.071	1.947

[1] Includes all coal produced other than Pennsylvania anthracite and the lignite included in the second column.
[2] North Dakota, South Dakota, and the lignite counties of Montana and Texas.
[3] Figures of the Bureau of Mines, excluding selling expense as before. Data on sales realization were not collected from lignite mines by the Coal Commission.

SPOT PRICES

Spot prices afford a basis for measuring the relative strength of the forces of demand and supply in the competitive market for bituminous coal. The market quotations published in the leading trade magazines usually are based upon posted prices of larger producers, and oftentimes represent "asked" rather than "actual" prices.

Spot prices are not to be confused with sales realization, as the latter includes a large volume of coal either sold at relatively stable prices under long-term contracts or consumed by producers and their affiliates at purely nominal prices.

The following table of average spot prices is offered as an indication of trends in 1937, 1938, and 1939.

TABLE 15.—*Trend of spot prices of bituminous coal per net ton, f. o. b. mines, as indicated by trade journal quotations, 1937–39* [1]

[Based upon 130 series of comparable quotations currently published in the Black Diamond, Saward's Journal, and Chicago Journal of Commerce. These have been grouped into prepared sizes, run-of-mine, and screenings or slack, and simple averages obtained. The 3 groups have then been combined into a weighted average, counting prepared sizes at 43 percent, run-of-mine at 27 percent, and screenings or slack at 30 percent. The resulting average for all coal is not intended to show the actual realization obtained, but gives a ready comparison of the trend of prices in the 3 years.]

Month	Prepared sizes			Run-of-mine			Screenings or slack			All coal			Change in 1939 (percent)
	1937	1938	1939	1937	1938	1939	1937	1938	1939	1937	1938	1939	
January [2]	$2.49	$2.58	$2.37	$2.06	$2.22	$2.06	$1.49	$1.81	$1.40	$2.07	$2.25	$2.02	−10.2
February [2]	2.49	2.54	2.35	2.07	2.21	2.06	1.54	1.77	1.40	2.09	2.22	2.01	−9.5
March	2.39	2.48	2.23	2.06	2.07	2.01	1.70	1.50	1.37	2.09	2.08	1.91	−8.2
April	2.30	2.22	[3]	2.11	2.08	[3]	1.77	1.51	[3]	2.09	1.99	[3]	[3]
May	2.30	2.21	[3]	2.13	2.07	[3]	1.77	1.51	[3]	2.10	1.96	[3]	[3]
June [2]	2.29	2.22	2.19	2.13	2.07	2.01	1.77	1.51	1.51	2.09	1.97	1.94	−1.5
July	2.33	2.23	2.22	2.07	2.07	1.99	1.74	1.47	1.50	2.08	1.96	1.94	−1.0
August	2.38	2.28	2.24	2.10	2.06	2.00	1.72	1.41	1.49	2.11	1.96	1.95	−.5
September	2.39	2.34	2.28	2.10	2.10	2.01	1.64	1.37	1.49	2.09	1.98	1.97	−.5
October	2.44	2.47	2.48	2.10	2.10	2.27	1.60	1.38	1.69	2.10	2.04	2.19	+7.4
November	2.45	2.45	2.45	2.11	2.07	2.25	1.59	1.33	1.65	2.10	2.01	2.16	+7.5
December [2]	2.49	2.43	2.35	2.16	2.06	2.22	1.71	1.34	1.60	2.17	2.00	2.09	+4.5
Average: 12 months	2.40	2.37	2.32	2.10	2.10	2.09	1.67	1.49	1.51	2.10	2.04	2.02	−1.0

[1] Except as noted, these averages are based upon the following number of quotations: Prepared sizes: Chicago market, 25 quotations; Cleveland market, 29 quotations; Norfolk market, 18 quotations; Pittsburgh market, 3 quotations; total, 75 quotations. Run-of-mine: Chicago market, 7 quotations; Cleveland market, 2 quotations; Norfolk market, 7 quotations; Pittsburgh market, 0; total, 16 quotations. Screenings or slack: Chicago market, 19 quotations; Cleveland market, 11 quotations; Norfolk market, 7 quotations; Pittsburgh market, 2 quotations; total, 39 quotations. Total of all quotations used, 130.

[2] Quotations for Cleveland and Pittsburgh in January and February and for Pittsburgh in June and December have been excluded from the computed averages due to lack of comparable data.

[3] Insufficient quotations during the greater part of April and May 1939, owing to suspension of mining operations pending the completion of a new wage agreement.

LABOR STATISTICS

MEN EMPLOYED

An average of 441,333 men was employed at bituminous-coal mines in 1938, a 10-percent decrease from the total of 491,864 for 1937. (See fig. 8.) Statistics of men employed in 1938 represent annual averages of the number of workers on the rolls on the days when the mines were in operation. Except for the slight discrepancy in comparability with 1937, the figures of employment for 1938 are comparable with similar date for earlier years. (See Minerals Yearbook, 1939, pp. 776 and 787–788.)

The method used here in calculating employment gives an accurate measure of the working force in the coal industry, but it does not consider the time lost by men on the rolls through intermittent opera-

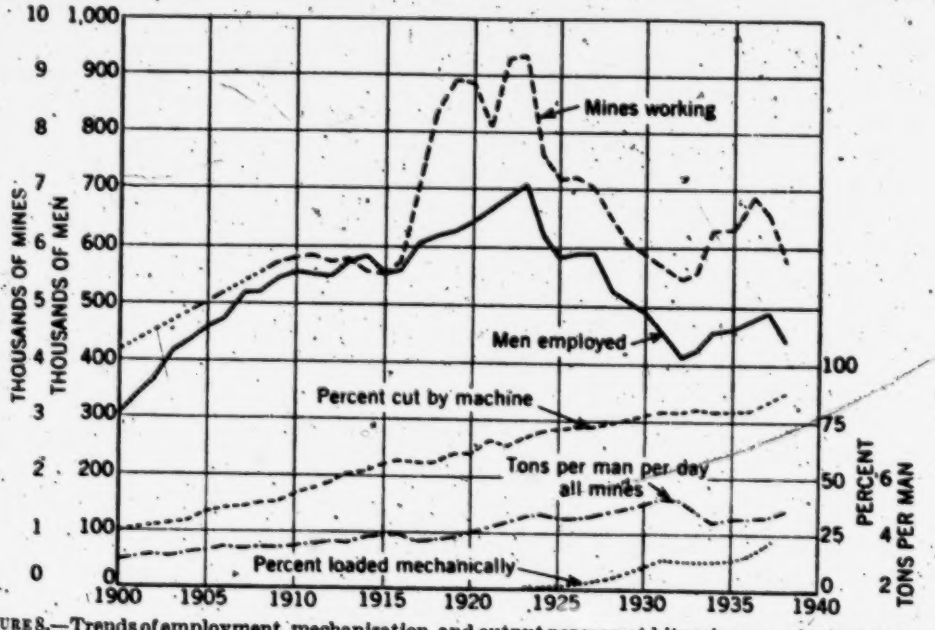

FIGURE 8.—Trends of employment, mechanization, and output per man at bituminous-coal mines, 1900-1938.

tions. To measure the influence of intermittency upon employment the factor of mine activity as indicated by the average number of days of plant operation was recorded separately. The average number of men employed when the mines were in operation was then used, in conjunction with the average number of days of operation, as a measure of the total volume of employment in the industry.

In recent years a special problem has arisen in recording employment through the adoption of local "share-the-work" agreements, by which the employees of a mine are divided into two crews or groups who work on alternate days. Such agreements for "staggering" or alternating the work are not to be confused with the practice of operating both a day and a night shift but relate rather to division of the available work between two groups of workers on the same shift, usually the day shift.

Specific inquiries regarding such agreements by the Illinois Department of Mines and Minerals in 1938 indicated that 45 mines in that State were operating with alternate crews under share-the-work agreements. If the number of men on the pay rolls had been used as

a measure of employment instead of the average number of men working, the employment figures for Illinois would have been increased approximately 3 percent. A small number of employees was involved in similar reports from Indiana.

The figures on "number of men employed" as given in this report are therefore somewhat less than the total number of men on the rolls in the States where there were mines that followed the practice of spreading employment by means of share-the-work agreements. No formal agreements for dividing work have been reported to the authors from mines outside of Illinois and Indiana in 1938; however, local share-the-work agreements may have existed in other fields, which were not reported, and occasionally at still other mines a certain amount of work sharing may have been practiced without written agreement between operators and their employees.

DAYS OPERATED

The average number of days of operation at bituminous-coal mines in 1938 was 162. This represents a decline from the average of 193 days for 1937. All statistics on days of mine operation included in this report are weighted averages, in which the operating time of each mine has been weighted by the number of its employees. Several coal-mining States publish series on the number of days worked that are simple averages of the figures for each reporting mine regardless of size. As these unweighted averages are likely to be unduly depressed by small mines, which generally operate fewer days than the larger ones, they tend to understate the working time of the typical mine employee.

MAN-DAYS OF LABOR

Only a small proportion of the bituminous-coal-mine operations, however, keep an accurate record of man-days or man-hours worked. Consequently, man-days have been computed by multiplying the number of workers employed by the number of operating days. Although these computations were made for each individual mine the combined total is necessarily only an approximation.

Until the American coal industry arranges to keep an accurate record of man-days or man-hours of employment all computations of accident rates, daily earnings, and output per man will remain subject to qualification. Meanwhile, the method of multiplying men by days must be accepted as the best available procedure.

Data for 1938 indicate that bituminous-coal-mine employees performed 71,325,374 man-days of labor during the year. Table 9 gives a summary record of men employed, days operated, and output per man per day at bituminous-coal mines by States in 1938. Details by counties for 1938 are shown in table 25.

LENGTH OF WORKING DAY

Data for computing the number of hours in the average working day of bituminous-coal miners have not yet been completed for 1938. As there was no change in the provision of the union wage agreement regarding hours of work it can be assumed that the 7.02-hour-per-day average for 1935 and 1936 also would apply to 1937 and 1938. For further discussion of length of working day and detailed statistics of earlier years see Minerals Yearbook, 1937, pages 821–823.

TABLE 16.—*Bituminous coal mined by different methods in the United States in 1938, by States*

State	From underground workings									From strip pits		Grand total production (net tons)
	Mined by hand		Shot off the solid		Cut by machines		Not specified		Total underground (net tons)	Net tons	Percent of grand total	
	Net tons	Percent of total underground	Net tons	Percent of total underground	Net tons	Percent of total underground	Net tons	Percent of total underground				
Alabama	1,311,878	11.9	1,605,453	14.5	8,098,747	73.5	8,925	0.1	11,025,003	36,490	0.3	11,061,493
Alaska	18,266	11.8	136,416	88.2					154,682			154,682
Arkansas			128,450	11.0	1,023,453	87.5	17,516	1.5	1,169,419	27,628	2.3	1,197,047
Colorado	1,158,398	20.5	264,975	4.7	4,190,492	74.1	37,610	.7	5,651,475	11,669	.2	5,663,144
Illinois	675,539	2.1	2,064,178	6.6	28,548,160	91.1	53,916	.2	31,341,793	10,570,292	25.2	41,912,085
Indiana	127,270	1.8	546,956	7.5	6,602,264	90.6	9,812	.1	7,286,302	7,472,182	50.6	14,758,484
Iowa	341,061	12.9	1,182,356	44.8	1,099,182	41.7	14,733	.6	2,637,332	465,855	15.0	3,103,187
Kansas	107,729	14.8	416,603	57.4	188,819	26.0	12,962	1.8	726,113	1,928,028	72.6	2,654,141
Kentucky:												
Eastern	1,149,857	3.7	365,058	1.2	29,643,789	95.0	18,768	.1	31,177,472			31,177,472
Western	189,832	2.8	129,424	1.9	6,438,633	95.2	5,677	.1	6,763,566	604,180	8.2	7,367,746
Maryland	726,997	56.7			544,345	42.5	10,071	.8	1,281,413			1,281,413
Michigan					494,481	100.0			494,481			494,481
Missouri	270,077	24.1	53,514	4.8	769,953	68.8	26,256	2.3	1,119,800	2,316,318	67.4	3,436,118
Montana and Texas[1]	136,335	5.6	774,218	31.6	1,529,428	62.3	12,707	.5	2,452,688	1,158,047	32.1	3,610,735
New Mexico	384,623	31.0	435,840	35.2	411,994	33.3	6,580	.5	1,239,037			1,239,037
North Dakota[1]	53,708	6.8	175,461	22.3	535,696	68.0	22,426	2.9	787,291	1,262,808	61.6	2,050,099
Ohio	370,386	2.3	125,127	.8	15,516,393	96.6	49,908	.3	16,061,814	2,528,804	13.6	18,590,618
Oklahoma	30,094	3.8	91,969	11.6	669,788	84.1	4,214	.5	796,065	448,667	36.0	1,244,732
Pennsylvania	13,121,993	17.1	2,042,122	2.7	61,381,208	80.2	27,587		76,572,910	1,131,627	1.5	77,704,537
South Dakota[1]	1,420	35.4					2,589	64.6	4,009	44,049	91.7	48,058
Tennessee	591,876	13.3	475,076	10.6	3,384,155	75.7	19,007	.4	4,470,114	2,289	.1	4,472,403
Utah	123,907	4.2	55,216	1.9	2,762,751	93.7	5,077	.2	2,946,951			2,946,951
Virginia	217,972	1.8	678,046	5.5	11,381,055	92.7	5,963		12,283,036			12,283,036
Washington	226,266	14.4	643,657	41.1	697,050	44.5			1,566,973			1,566,973
West Virginia	4,769,638	5.1	561,667	.6	87,700,862	94.3	29,501		93,061,668	226,504	.2	93,288,172
Wyoming	167,990	3.3	161,118	3.2	4,698,826	93.4	4,525	.1	5,032,459	171,418	3.3	5,203,877
Other States[2]	1,328	3.9	28,874	84.8	3,841	11.3			34,043			34,043
	26,274,440	8.3	13,141,774	4.1	278,315,365	87.5	406,330	.1	318,137,909	30,406,855	8.7	348,544,764

[1] Includes lignite figures compiled by Bureau of Mines.

[2] Includes Arizona, Georgia, Idaho, and Oregon.

FUEL EFFICIENCY

TABLE 17.—*Indicators of the effect of fuel economy on consumption of coal per unit of performance since the World War*

	Pounds	Reduction from base period (percent)
Steam railroads:		
Pounds per 1,000 gross ton-miles freight service:		
Average, 1919–20	170	
Average, 1938	115	32.4
Average, 1939	112	34.1
Pounds per passenger-train car-mile:		
Average, 1919–20	18.5	
Average, 1938	14.9	19.5
Average, 1939	14.8	20.0
Electric public utility power plants:		
Pounds per kilowatt-hour, 1919	3.2	
Pounds per kilowatt-hour, 1938	1.4	56.2
Pounds per kilowatt-hour, 1939	1.4	56.2
Iron and steel—pounds coking coal per gross ton of pig: [1]		
1918	3,577	
1938	2,894	19.1
1939	2,853	20.2
Coke manufacture: Savings of heat values through recovery of gas, tar, light oils, and breeze by extension of byproduct in place of beehive coking, 1913–1939, expressed as percent of coal used for all coke in 1939 [2]		20.6

[1] Includes only savings through higher yields of merchantable coke per ton of coal charged and lower consumption of coke per ton of iron. Excludes economies through recovery of byproducts, which are treated in next item.

[2] These byproducts are used in part for boiler fuel, in part for metallurgical purposes, in part for domestic heating and cooking, and to a small extent for automotive fuel.

STOCKS HELD BY CONSUMERS

TABLE 18.—*Stocks of bituminous coal in hands of commercial consumers and of anthracite and bituminous coal in retail dealers' yards, 1938–39*

Date	Total stock of bituminous coal estimated (net tons)	Days' supply at current rate of consumption on date of stock taking									
		Byproduct coke plants	Steel plants	Other industrials	Coal-gas plants	Electric utilities	Retail yards, bituminous	Railroads	Cement mills	Total bituminous	Retail yards, anthracite
1938											
Jan. 1	47,074,000	56	44	42	61	79	25	32	39	40	36
Feb. 1	41,967,000	51	41	37	53	82	22	28	49	37	27
Mar. 1	38,484,000	46	35	33	51	83	22	28	53	35	26
Apr. 1	35,359,000	43	33	33	51	87	22	28	47	36	25
May 1	34,102,000	43	36	35	50	97	36	29	27	41	44
June 1	33,158,000	47	37	39	57	91	53	28	22	45	58
July 1	33,452,000	51	37	40	63	85	64	27	21	46	57
Aug. 1	33,615,000	54	35	43	68	81	69	26	18	47	58
Sept. 1	34,579,000	49	31	41	68	73	52	25	19	43	63
Oct. 1	36,507,000	47	29	42	61	72	39	24	22	41	44
Nov. 1	39,024,000	46	26	42	60	71	40	24	21	40	39
Dec. 1	40,817,000	47	24	39	57	71	34	24	24	38	31
Dec. 31	40,720,000	49	25	35	54	71	25	24	32	35	37
1939											
Jan. 1	40,720,000	49	25	35	54	71	25	24	32	35	37
Feb. 1	39,720,000	48	27	34	49	72	23	25	51	35	29
Mar. 1	39,887,000	48	32	31	45	78	19	29	46	34	23
Apr. 1	40,505,000	46	40	33	47	86	21	34	35	37	22
May 1	31,746,000	32	29	32	41	81	22	32	24	35	35
June 1	25,413,000	24	25	32	32	69	33	27	20	34	61
July 1	26,991,000	24	23	32	41	61	54	23	16	34	71
Aug. 1	29,725,000	30	24	39	48	61	56	22	19	37	61
Sept. 1	33,624,000	34	23	40	55	61	49	22	20	38	58
Oct. 1	36,943,000	34	22	43	58	59	32	20	24	35	47
Nov. 1	42,020,000	35	20	42	62	58	33	21	26	35	57
Dec. 1	45,542,000	38	19	42	58	60	34	22	29	36	58
Dec. 31	44,571,000	37	21	40	56	60	26	23	32	34	57

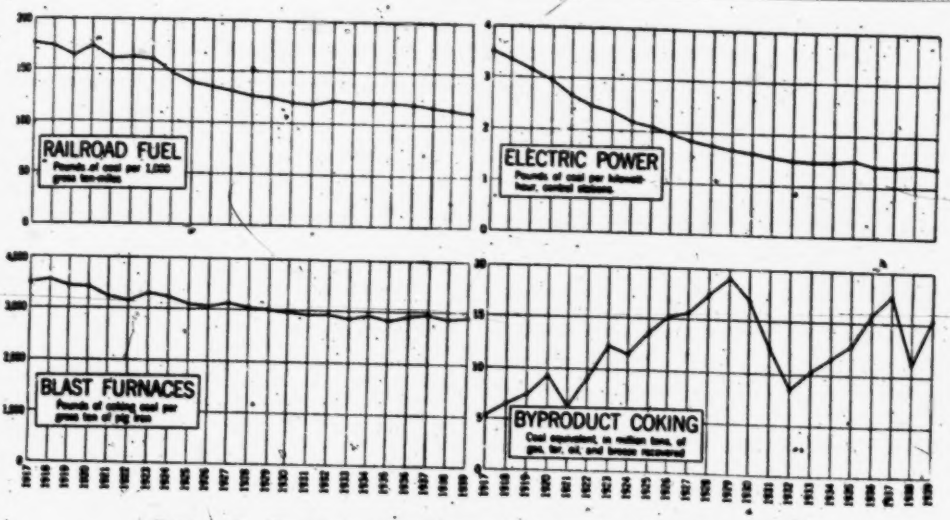

FIGURE 9.—Trends in fuel efficiency in the United States, 1917-39.

COAL LOADED FOR SHIPMENT BY INDIVIDUAL RAILROADS AND WATERWAYS

Table 19 shows the quantity of bituminous coal originated on each railroad and waterway in 1938, as reported by mine operators in answer to the following inquiry:

a. List railroads or waterways on which product was first loaded for shipment:

(Name of road or waterway)	(Net tons loaded on each)
----------	----------
----------	----------
----------	----------

b. On coal hauled by truck, if any, to railroad siding or to river for shipment, report below:

Name of railroad ..... Shipping point ..... Distance hauled ..... miles.

Name of river ..... Loading point ..... Distance hauled ..... miles.

As these statistics include nonrevenue railroad fuel they may differ from those compiled by the railroad companies, which often show only revenue freight and include coal received from connecting lines or coal shipped off the Lakes docks, as well as that originating at mines on the lines reporting.

In general, the figures are given under the name reported by the operator, and the Bituminous Coal Division does not attempt to combine them under the name of the larger system, believing that such combination can best be made by those using the figures, as they are probably familiar with coal-traffic problems. If such combination is made, the total usually will be found to check reasonably well with the statistics issued by railroads that keep records of total coal originated.

Where the road serving the district is a subsidiary of a larger road some operators may report their coal as loaded on the subsidiary and others as loaded on the parent system (a few subsidiaries have been consolidated under the name of the parent road).

TABLE 19.—*Bituminous coal loaded for shipment in 1938 by individual railroads and waterways, as reported by operators, in net tons*

Route	State	Quantity	
		By State	Total for route
RAILROADS			
Alabama Central	Alabama	9,298	9,298
Alabama Great Southern	do	140,381	140,381
Alaska	Alaska	151,656	151,656
Algers, Winslow & Western	Indiana	1,652,298	1,652,298
Alton	Illinois	704,755	747,043
	Missouri	42,288	
Artemus-Jellico	Kentucky	373,595	373,595
Atchison, Topeka & Santa Fe	Colorado	173,496	2,191,537
	Illinois	647,061	
	Kansas	394,912	
	Missouri	106,009	
	New Mexico	870,059	
Baltimore & Ohio	Illinois	285,415	21,011,133
	Indiana	406,598	
	Maryland	97,827	
	Ohio	2,264,637	
	Pennsylvania	7,675,869	
	West Virginia	10,280,789	
Bessemer & Lake Erie	Pennsylvania	2,359,640	2,359,640
Bevier & Southern	Missouri	422,405	422,405
Birchwood Lumber Co	West Virginia	1,636	1,636
Birmingham Southern	Alabama	11,244	11,244
Buffalo Creek & Gauley	West Virginia	641,404	641,404
Cambria & Indiana	Pennsylvania	3,152,415	3,152,415
Campbell's Creek	West Virginia	889,739	889,739
Carbon County	Utah	256,648	256,648
Caseyville	Illinois	124,197	124,197
Central of Georgia	Alabama	649,644	675,280
	Georgia	25,636	
Chesapeake & Ohio	Kentucky	6,834,646	38,303,094
	Ohio	450,326	
	West Virginia	31,018,122	
Chesapeake & Ohio of Indiana	Pennsylvania	747,104	747,104
Chicago & Eastern Illinois	Illinois	982,675	2,494,066
	Indiana	1,511,391	
Chicago & Illinois Midland	Illinois	3,554,393	3,554,393
Chicago & North Western	do	2,101,092	2,123,755
	Wyoming	22,663	
Chicago, Burlington & Quincy	Colorado	276,301	6,797,028
	Illinois	5,619,660	
	Iowa	151,166	
	Missouri	66,593	
	Wyoming	683,308	
Chicago, Indianapolis & Louisville	Indiana	1,207,400	1,207,400
Chicago, Milwaukee, St. Paul & Pacific	Illinois	52,571	4,870,094
	Indiana	3,487,038	
	Iowa	595,743	
	Missouri	4,389	
	Montana	677,478	
	North Dakota	46,994	
	South Dakota	(1)	
	Washington	5,881	
Chicago, Rock Island & Pacific	Arkansas	6,326	1,464,936
	Illinois	655,449	
	Iowa	549,635	
	Missouri	146,490	
	Oklahoma	107,036	
Chicago, Springfield & St. Louis	Illinois	123,457	123,457
Cleveland, Cincinnati, Chicago & St. Louis	do	3,233,646	4,053,599
	Indiana	819,953	
Clinchfield	Kentucky	87,535	1,812,419
	Virginia	1,724,884	
Colorado & Southeastern	Colorado	150,972	150,972
Colorado & Southern	do	379,253	379,253
Colorado & Wyoming	do	241,464	241,464
Conemaugh & Black Lick	Pennsylvania	26,700	26,700
Crystal River & San Juan	Colorado	530	530
Cumberland & Pennsylvania	Maryland	455,127	455,127
Dardanelle & Russellville	Arkansas	37,069	37,069
Denver & Intermountain	Colorado	106,478	106,478
Denver & Rio Grande Western	do	1,103,507	2,744,294
	New Mexico	15,747	
	Utah	1,625,040	
Denver & Salt Lake	Colorado	700,760	700,760
Des Moines & Central Iowa	Iowa	94,831	94,831

See footnotes at end of table.

TABLE 19.—*Bituminous coal loaded for shipment in 1938 by individual railroads and waterways, as reported by operators, in net tons*—Continued

Route	State	Quantity	
		By State	Total for route
RAILROADS—continued			
Detroit, Toledo & Ironton	Ohio	10,253	10,253
East Broad Top Railroad & Coal Co	Pennsylvania	411,896	411,896
Eastern Railway & Lumber Co	Washington	865	865
Erie	Ohio	178	1,061,132
	Pennsylvania	1,060,954	
Evansville & Ohio Valley	Indiana	8,245	8,245
Evansville, Suburban & Newburgh	do	178,383	178,383
Fort Dodge, Des Moines & Southern	Iowa	5,259	5,259
Forth Smith & Western	Oklahoma	113,615	113,615
Fort Smith, Subiaco & Rock Island	Arkansas	10,073	10,073
Galesburg & Great Eastern	Illinois	499,309	499,309
Grand Trunk	Michigan	4,905	4,905
Great Northern	Montana	[3] 788,334	912,083
	North Dakota	(2)	
	Washington	123,699	
Harriman & Northeastern	Tennessee	240,177	240,177
Huntington & Broad Top Mountain Railroad & Coal Co	Pennsylvania	107,849	107,849
Illinois Central	Alabama	195,901	11,634,507
	Illinois	7,047,791	
	Indiana	152,454	
	Kentucky	4,238,361	
Illinois Terminal	Illinois	594,372	594,372
Indiana	Indiana	243,215	243,215
International-Great Northern	Texas	[3] 813,096	813,096
Interstate	Kentucky	44,895	1,780,707
	Virginia	1,735,812	
Iowa Southern Utilities Co	Iowa	145,542	145,542
Johnstown & Stony Creek	Pennsylvania	88,852	88,852
Joplin-Pittsburg	Kansas	278,545	278,545
Kanawha Central	West Virginia	155,602	155,602
Kanawha, Glen Jean & Eastern	do	425,293	425,293
Kansas City Southern	Kansas	19,899	564,300
	Missouri	507,095	
	Oklahoma	37,606	
Kansas, Oklahoma & Gulf	do	20,818	20,818
Kelley's Creek & Northwestern	West Virginia	756,612	756,612
Kentucky & Tennessee	Kentucky	621,915	621,915
Lake Erie, Franklin & Clarion	Pennsylvania	45,136	45,136
Laramie, North Park & Western	Colorado	9,824	9,824
Ligonier Valley	Pennsylvania	174,704	174,704
Litchfield & Madison	Illinois	358,478	358,478
Louisville & Nashville	Alabama	1,800,125	22,517,797
	Illinois	20,189	
	Kentucky	19,871,740	
	Tennessee	682,589	
	Virginia	143,154	
Mary Lee	Alabama	878,258	878,258
Michigan Central	Michigan	6,037	6,037
Midland Valley	Arkansas	279,754	412,387
	Oklahoma	132,633	
Minneapolis & St. Louis	Illinois	690,165	690,165
Minneapolis, St. Paul & Sault Ste. Marie	North Dakota	524,438	524,438
Missouri-Illinois	Illinois	13,411	13,411
Missouri-Kansas-Texas	Kansas	241,092	483,832
	Missouri	60,077	
	Oklahoma	182,663	
	Texas	(2)	
Missouri Pacific	Arkansas	700,693	5,901,685
	Illinois	3,980,749	
	Kansas	834,560	
	Missouri	385,683	
Mobile & Ohio	Alabama	73,372	504,468
	Illinois	431,096	
Monongahela	Pennsylvania	1,915,475	8,257,009
	West Virginia	6,341,534	
Montana	Arkansas	13,231	13,231
Montana, Wyoming & Southern	Montana	298,433	298,433
Montour	Pennsylvania	4,046,461	4,046,461
Nashville, Chattanooga & St. Louis	Tennessee	681,193	681,193
New York Central (includes coal shipped over Kanawha & Michigan, Kelley's Creek, Toledo & Ohio Central, and Zanesville & Western)	Ohio	4,408,038	8,690,598
	Pennsylvania	3,523,819	
	West Virginia	758,741	
Nicholas, Fayette & Greenbrier	do	1,403,696	1,403,696

See footnotes at end of table.

TABLE 19.—*Bituminous coal loaded for shipment in 1938 by individual railroads and waterways, as reported by operators, in net tons*—Continued

Route	State	Quantity	
		By State	Total for route
RAILROADS—continued			
Norfolk & Western	Kentucky	3,574,816	31,498,127
	Virginia	7,018,344	
	West Virginia	20,904,967	
Northern Alabama	Alabama	216,835	216,835
Northern Pacific	Montana	1,096,293	2,455,778
	North Dakota	582,697	
	Washington	774,788	
Oneida & Western	Tennessee	18,739	18,739
Pacific Coast	Washington	214,704	214,704
Pennsylvania (includes Pittsburgh, Cincinnati, Chicago & St. Louis)	Illinois	152,115	30,104,737
	Indiana	1,584,475	
	Ohio	3,822,069	
	Pennsylvania	24,114,101	
	West Virginia	431,977	
Peoria & Pekin Union	Illinois	24,555	24,555
Peoria Terminal	do	878,146	878,146
Pere Marquette	Michigan	155,201	155,201
Pittsburg & Shawmut	Pennsylvania	698,844	698,844
Pittsburg County	Oklahoma	7,290	7,290
Pittsburgh & Lake Erie	Pennsylvania	2,498,076	2,498,076
Pittsburgh & West Virginia	Ohio	269,919	1,733,471
	Pennsylvania	1,463,452	
	West Virginia	100	
Pittsburgh, Lisbon & Western	Ohio	46,828	54,317
	Pennsylvania	7,489	
Pittsburg, Shawmut & Northern	do	411,769	411,769
Quincy, Omaha & Kansas City	Missouri	27,017	27,017
Rio Grande & Eagle Pass	Texas	12,717	12,717
Rio Grande Southern	Colorado	12,420	12,420
Rockdale, Sandow & Southern	Texas	(3)	(3)
St. Louis & O'Fallon	Illinois	286,625	286,625
St. Louis-San Francisco	Alabama	833,146	2,491,350
	Arkansas	120,094	
	Kansas	611,053	
	Missouri	403,880	
	Oklahoma	523,197	
St. Louis Southwestern of Texas	Texas	(3)	(3)
Seaboard Air Line	Alabama	99,895	99,895
Southern	do	1,436,428	6,462,934
	Illinois	42,423	
	Indiana	1,232,503	
	Kentucky	1,050,185	
	Tennessee	1,596,929	
	Virginia	1,104,466	
Southern Pacific	New Mexico	217,966	217,966
Springfield Terminal	Illinois	273,753	273,753
Susquehanna & New York	Pennsylvania	11,324	11,324
Tennessee	Tennessee	640,852	640,852
Tennessee Central	do	199,527	199,527
Tennessee Coal, Iron & Railroad Co	Alabama	2,536,353	2,536,353
Texas & Pacific	Texas	7,696	7,696
Texas Short Line	do	(3)	(3)
Thomas & Sayreton	Alabama	528,622	528,622
Toledo, Peoria & Western	Illinois	21,822	21,822
Uintah	Colorado	5,003	5,003
Union	Pennsylvania	97,545	97,545
Union Pacific	Colorado	739,109	4,932,009
	Kansas	11,078	
	Utah	7,540	
	Washington	29,972	
	Wyoming	4,144,910	
Unity	Pennsylvania	703,335	703,335
Utah	Utah	702,694	702,694
Virginian	Virginia	(4)	9,974,240
	West Virginia	9,974,240	
Wabash	Illinois	1,079,251	1,502,368
	Iowa	100,269	
	Missouri	322,846	
Western Allegheny	Pennsylvania	88,880	88,880
Western Maryland	Maryland	497,873	3,693,934
	Pennsylvania	308,474	
	West Virginia	2,887,587	

See footnotes at end of table.

TABLE 19.—*Bituminous coal loaded for shipment in 1938 by individual railroads and waterways, as reported by operators, in net tons*—Continued

Route	State	Quantity	
		By State	Total for route
RAILROADS—continued			
West Virginia Northern	West Virginia	75,339	75,339
West Virginia Pulp & Paper Co.	do	17,160	17,160
Wheeling & Lake Erie	Ohio	2,871,988	2,871,988
Winfield	Pennsylvania	1,134	1,134
Winifrede	West Virginia	89,452	89,452
Woodward Iron Co.	Alabama	868,951	868,951
Youngstown & Suburban	Ohio	10,950	10,950
Total railroad shipments		295,336,027	295,336,027
WATERWAYS			
Allegheny River	Pennsylvania	963,140	963,140
Black Warrior River	Alabama	77,293	77,293
Green River	Kentucky	2,168	2,168
Illinois River	Illinois	82,266	82,266
Kanawha River	West Virginia	1,819,117	1,819,117
Mississippi River	Illinois	1,955	1,955
Monongahela River	Pennsylvania	12,042,824	12,535,515
Muskingum River	West Virginia	492,691	
Ohio River	Ohio	691,572	691,572
	Kentucky	210,656	721,438
	Ohio	1,940	
Youghiogheny River	Pennsylvania	1,250	
	West Virginia	507,592	
Total waterway shipments	Pennsylvania	8,505	8,505
		16,902,969	16,902,969
Grand total, loaded at mines for shipment by railroads and waterways.		312,238,996	312,238,996
Shipped by truck or wagon		25,592,058	25,592,058
Coal used by employees or taken by locomotives at tipple or other uses at mines.		6,860,817	6,860,817
Used for power and heat or made into coke at mines		3,852,893	3,852,893
Total production		348,544,764	348,544,764

[1] South Dakota included with North Dakota. [2] Includes North Dakota and Montana lignite.
[3] Includes Missouri-Kansas-Texas, Rockdale, Sandow & Southern, St. Louis Southwestern of Texas, and Texas Short Line for Texas lignite mines.
[4] Includes Virginian Railroad in Montgomery and Pulaski Counties.

IMPORTS AND EXPORTS [1]

TABLE 20.—*Bituminous coal* [2] *imported for consumption in the United States, 1938–39, by countries and customs districts, in net tons*

	1938	1939
Country		
North America: Canada	240,729	296,701
Europe:		
France	437	
United Kingdom	139	58,414
	241,305	355,115
Customs district		
Alaska	11,634	8,163
Buffalo		101
Chicago		2
Dakota	162	124
Duluth and Superior	78	253
***Customs district*—Continued**		
Los Angeles	1,131	
Maine and New Hampshire	88,314	127,325
Michigan		80
Montana and Idaho	95,511	103,408
New Orleans	437	
New York		40,365
Rhode Island		8,238
St. Lawrence	242	6,796
Vermont	2,313	11,740
Virgin Islands	139	9,811
Washington	41,344	38,709
	241,305	355,115

[1] Includes slack, culm, and lignite.
[2] Figures on imports and exports compiled by M. B. Price, of the Bureau of Mines, from records of the Bureau of Foreign and Domestic Commerce.

TABLE 21.—*Exports of bituminous coal to Canada and Mexico, the West Indies and Central America, and "overseas" destinations, 1935–39, in thousands of net tons*

Year	Canada and Mexico	West Indies and Central America [1]	"Overseas" (all other countries)							Grand total
			Newfoundland, Miquelon, and Bermuda	South America	Europe	Asia	Africa	Oceania	Total "overseas"	
1935	9,044	456	31	197	9	5	----	----	242	9,742
1936	9,912	470	44	163	50	(2)	(2)	16	273	10,655
1937	12,052	732	51	265	10	24	11	----	361	13,145
1938	9,561	619	23	247	11	29	----	----	310	10,490
1939	9,976	599	76	681	165	91	2	----	1,015	11,590

[1] Includes Bahamas and Panama. [2] 1 ton. [3] 3 tons.

TABLE 22.—*Bituminous coal exported from the United States, 1938–39, by countries, in net tons* [1]

Country	1938	1939
North America:		
Bermuda	5,253	3,923
British Honduras	722	467
Canada	9,559,726	9,974,908
Central America:		
Costa Rica	----	39
Guatemala	158	217
Honduras	365	327
Nicaragua	26	75
Panama:		
Canal Zone	96,310	153,278
Republic of	11,651	6
Salvador	76	44
Mexico	991	1,011
Miquelon and St. Pierre Islands	1	4,344
Newfoundland and Labrador	17,703	67,869
West Indies:		
British:		
Barbados	609	1,284
Jamaica	83,637	77,786
Trinidad and Tobago	42,779	38,581
Other British	19,206	10,630
Cuba	347,565	292,191
Dominican Republic	74	310
French	13,241	20,204
Haiti	28	47
Netherlands	3,218	3,401
	10,203,339	10,650,942
South America:		
Argentina	15,193	232,406
Bolivia	51	2,136
Brazil	204,294	425,022
Chile	----	5,011
Colombia	12	46
Ecuador	49	166

Country	1938	1939
South America—Continued.		
Guiana: Surinam	4,532	3,370
Peru	2,249	3,381
Uruguay	20,876	9,193
Venezuela	46	81
	247,302	680,827
Europe:		
Denmark	----	3,033
France	11,192	----
Italy	----	38,612
Norway	----	42,057
Portugal	----	4,883
Spain	----	25,739
Sweden	----	26,516
Switzerland	----	24,349
United Kingdom	(2)	----
	11,192	165,391
Asia:		
China	21,363	53,729
Indochina (French)	----	7,516
Iran	6	----
Netherland India	7,067	12,234
Philippine Islands	----	18,069
	28,436	91,563
Africa:		
Canary Islands	----	1,701
Union of South Africa	----	58
	----	1,759
Grand total	10,490,269	11,590,479

[1] Amounts stated do not include fuel or bunker coal loaded on vessels engaged in the foreign trade which aggregated 1,352,480 tons in 1938 and 1,476,556 tons in 1939.
[2] Less than 1 ton.

TABLE 23.—*Bituminous coal exported from the United States, 1938–39, by customs districts, in net tons*

District	1938	1939
North Atlantic:		
Maine and New Hampshire	189	219
Massachusetts	2	
New York	3,397	1,157
Philadelphia	9,116	13,330
South Atlantic:		
Maryland	45,171	244,444
South Carolina	77,267	82,369
Virginia	781,287	1,243,397
Gulf Coast:		
Florida	14	3,540
Mobile	1,318	6,687
New Orleans	1,649	1,204
Mexican border:		
Arizona	280	598
El Paso	253	102
San Antonio	31	26
Pacific Coast:		
Los Angeles	2	1
San Diego	76	84
Pacific Coast—Continued.		
San Francisco	21,382	25,535
Washington	4,845	4,389
Northern border:		
Buffalo	605,487	619,911
Dakota	7,159	7,494
Duluth and Superior	30,783	41,273
Michigan	1,048,498	1,238,218
Montana-Idaho	263	466
Ohio	6,513,272	6,519,949
Rochester	1,042,924	1,153,914
St. Lawrence	295,341	381,796
Vermont	122	152
Wisconsin	112	101
Miscellaneous:		
Alaska	26	114
Puerto Rico	2	7
Virgin Islands	1	1
	10,490,269	11,590,478

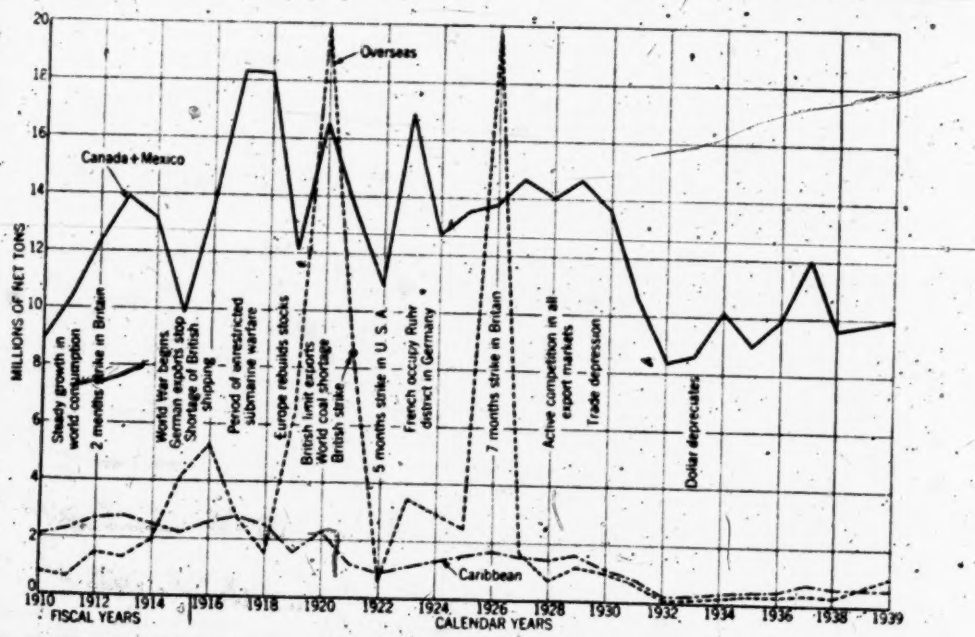

FIGURE 10.—Exports of bituminous coal to Canada and Mexico, the Caribbean, and "overseas" destinations, 1910–39.

Shipments to Alaska, Canton and Enderbury, Hawaii, Midway Islands, Puerto Rico, and the Virgin Islands.—In addition to export trade proper the United States supplies a small tonnage of anthracite and bituminous coal to Alaska, Canton and Enderbury, Hawaii, the Midway Islands, Puerto Rico, and the Virgin Islands. Shipments of bituminous coal to each of these possessions in 1939 were as follows: Alaska, 17,587 net tons; Canton and Enderbury, 3 net tons; Hawaii, 1,540 net tons; Midway Islands, 81 net tons; Puerto Rico, 14,709 net tons; and Virgin Islands, 69,751 net tons. Comparative shipments for 1938 were: Alaska, 23,465; Canton and Enderbury, none; Hawaii, 773; Midway Islands, none; Puerto Rico, 19,967; and Virgin Islands, 93,065.

WORLD PRODUCTION

TABLE 24.—*World production of coal and lignite, 1935–39, by countries, in thousands of metric tons* [1]

[Compiled by R. B. Miller, Bureau of Mines]

Country	1935	1936	1937	1938	1939
North America:					
Canada:					
Coal	9,358	10,308	11,014	9,815	10,983
Lignite	3,241	3,508	3,352	3,153	3,094
Greenland	6	5	6	7	(2)
Mexico	990	1,072	912	893	(2)
United States:					
Anthracite	47,317	49,513	47,043	41,820	46,708
Bituminous	335,315	395,511	401,257	313,473	353,885
Lignite	2,495	2,821	2,920	2,720	2,696
South America:					
Brazil	757	648	763	883	1,030
Chile	1,900	1,875	1,988	2,044	1,882
Colombia	200	282	330	331	(2)
Peru	85	90	99	75	63
Venezuela	6	6	7	6	3
Europe:					
Albania: Lignite	2	3	4	4	(2)
Belgium	26,506	27,867	29,859	29,585	29,847
Bulgaria:					
Coal	93	102	120	142	(2)
Lignite	1,566	1,576	1,732	1,855	(2)
Czechoslovakia:					
Coal	10,894	12,233	16,778	15,800	(2)
Lignite	15,114	15,949	17,895	14,717	(2)
Faroe Islands: Lignite				8	(2)
France:					
Coal	46,213	45,228	44,319	46,498	51,600
Lignite	907	943	1,015	1,057	
Germany: [3]					
Coal	132,379	146,707	171,148	171,788	(2)
Lignite	146,033	160,276	183,538	195,312	(2)
Austria:					
Coal	261	244	230	227	(2)
Lignite	2,971	2,897	3,242	3,342	(2)
Saar [4]	10,624	11,673	13,365	14,389	(2)
Greece: Lignite	83	106	131	108	(2)
Hungary:					
Coal	823	827	917	1,042	(2)
Lignite	6,718	7,105	8,055	8,320	(2)
Irish Free State	115	127	128	120	120
Italy:					
Coal	443	806	964	1,480	1,091
Lignite	545	769	1,059	873	1,410
Netherlands:					
Coal	11,878	12,803	14,321	13,488	12,861
Lignite	86	89	143	171	197
Poland:					
Coal	28,545	29,748	36,218	38,104	(2)
Lignite	18	14	19	10	(2)
Portugal:					
Coal	211	217	259	299	313
Lignite	20	21	23	15	35
Rumania:					
Coal	278	293	303	299	(2)
Lignite	1,667	1,672	1,880	2,097	(2)
Spain:					
Coal	7,016	(5)	(5)	5,289	6,753
Lignite	304	(5)	(5)	68	204
Svalbard (Spitsbergen)	709	784	766	627	(2)
Sweden	424	456	460	444	449
Switzerland	4	3	4	3	3
United Kingdom:					
Great Britain	225,816	232,115	244,268	230,659	236,700
Northern Ireland	4	5	1	(6)	(7)
U. S. S. R.:					
Coal	76,998	93,685	94,525	98,627	(2)
Lignite					
Yugoslavia:					
Coal	390	441	428	450	443
Lignite	4,002	4,035	4,574	5,287	5,604

See footnotes at end of table.

TABLE 24.—*World production of coal and lignite, 1935–39, by countries, in thousands of metric tons*—Continued

Country	1935	1936	1937	1938	1939
Asia:					
British Borneo	(2)	(2)	(2)	(2)	(2)
China	[7] 26,125	[7] 27,116	(2)	(2)	(2)
Chosen	1,999	2,282	2,348	(2)	(2)
Federated Malay States	383	511	638	486	402
India, British:					
Coal	23,540	23,129	25,586	28,972	(2)
Lignite	430	419	488	545	(2)
Indochina:					
Coal	1,775	2,186	2,308	2,340	2,600
Lignite				4	(2)
Japan:					
Japan proper:					
Coal	37,674	41,903	(2)	(2)	(2)
Lignite	109	109	(2)	(2)	(2)
Karafuto	1,516	2,010	(2)	(2)	(2)
Taiwan	1,597	1,744	(2)	(2)	(2)
Levant: Lignite		(2)	5	(2)	1
Netherland India	1,111	1,147	1,364	1,457	1,755
Philippine Islands		25	22	[8] (2)	(2)
Turkey:					
Coal	2,340	2,299	2,307	2,589	2,696
Lignite	73	95	116	129	151
U. S. S. R.:					
Coal	32,062	32,785	32,616	34,261	(2)
Lignite					
Africa:					
Algeria	38	7	14	13	(2)
Belgian Congo: Coal	11	14	36	42	(2)
Morocco, French	53	49	107	123	116
Nigeria	262	296	369	368	(2)
Portuguese East Africa	16	8	19	10	8
Southern Rhodesia	695	705	1,029	1,044	1,118
Union of South Africa	13,574	14,642	15,491	16,284	16,888
Oceania:					
Australia:					
New South Wales	8,838	9,347	10,213	9,725	11,376
Queensland	1,069	1,064	1,138	1,131	1,339
Tasmania	126	134	93	85	99
Victoria:					
Coal	434	434	262	312	371
Lignite	2,257	3,094	3,448	3,734	3,710
Western Australia	546	574	562	614	568
New Zealand:					
Coal	838	873	986	994	2,380
Lignite	1,311	1,302	1,329	1,264	
Total, all grades	1,323,000	1,453,000	1,550,000	1,466,000	(2)
Lignite (total of items shown above)	204,000	225,000	254,000	264,000	(2)
Bituminous and anthracite (by subtraction)	1,119,000	1,228,000	1,296,000	1,202,000	(2)

[1] Coal is also mined in Argentina, Iran, and Italian East Africa. Production figures for these countries are not available, but estimates are included in the totals. All figures for 1939 are to be considered as preliminary and subject to revision.
[2] Data not yet available.
[3] Exclusive of mines in the Saar.
[4] Mines under French control until Mar. 1, 1935
[5] Estimate included in total.
[6] Production less than 1,000 tons.
[7] Production of most important coal mines.

DETAILED STATISTICS, BY STATES AND COUNTIES

Detailed production and employment statistics are given in table 25 for each coal-producing county in the United States from which three or more operators submitted reports in 1938. Statistics for counties with less than three reporting producers have been combined with data for other counties in the same State to avoid disclosing individual returns, unless permission to publish has been granted by the operators.

In this series the reported production is classified according to the principal methods of distribution or use. Beginning with 1932 the series was expanded to include data on the growing volume of coal moving from mine to consumer by truck. For 1933–36 this tonnage was shown as "commercial sales by truck or wagon." In 1937 this tonnage was shown as "truck deliveries, including local sales." (See Minerals Yearbook, 1939, p. 813.) In 1938 the truck tonnage was shown as "shipped by truck or wagon." The truck figures for 1933 to 1936, inclusive, and 1938 are reasonably comparable.

The data in this report, like those published for many years by the Bureau of Mines, relate only to mines with an annual output of 1,000 tons or more. Although all mines, regardless of size, are subject to regulation under the provisions of the National Bituminous Coal Act of 1937, it seemed advisable to maintain the continuity of the old series by excluding the very small mines that sell by truck or wagon. This fact should be borne in mind when the statistics in this report are compared with similar data compiled by State mine departments. Differences arise largely from variations in coverage of the State reports, some of which include data for all mines regardless of size and others only data for mines employing more than a specified minimum number, which ranges from 2 to 10 men.

Because of a change in the method of reporting, the statistics of average production per man per day for 1932 to 1936 and 1938 are not precisely comparable with those for earlier years. Before 1932 they were based upon the calculated number of man-shifts, obtained by multiplying the average number of men employed at each mine by the number of days worked at the mine. Since 1932 operators have been asked to make a special report of the number of man-shifts actually worked if possible. The number of operators able to furnish this information has been small, although it is increasing from year to year. These reports were utilized to improve the accuracy of the record. Otherwise, the man-shifts were calculated by multiplying the number employed underground and on the surface by the number of days worked by the mine and tipple, respectively.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*

[Note that figures relate only to active mines of commercial size, excluding truck and wagon mines producing less than 1,000 tons. Waste and refuse are not included in tonnage]

ALABAMA

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface: In strip pits	Surface: All others	Total			
Bibb	443,972	5,609	1,656	12,650	463,887	1,028	.....	157	1,185	153	181,392	2.56
Blount	91,476	30,931	110	180	122,697	306	24	48	378	174	65,687	1.87
Cullman	.....	26,441	10	.....	26,451	79	.....	16	95	199	18,906	1.40
Etowah	16,435	26,347	117	.....	42,899	90	.....	12	102	205	20,889	2.05
Jefferson	6,459,262	154,744	65,360	13,983	6,693,349	10,536	.....	1,459	11,995	190	2,273,151	2.94
Marion	198,301	52,544	1,475	.....	252,320	640	3	96	739	149	110,300	2.29
St. Clair	749,539	32,325	6,984	28,518	817,366	1,146	.....	101	1,247	194	241,811	3.39
Shelby	289,391	72,782	2,050	768	364,991	665	.....	136	801	185	148,411	2.46
Tuscaloosa	56,549	49,553	.....	.....	106,102	260	14	33	307	174	53,497	1.98
Walker	1,977,237	77,840	31,762	1,076	2,087,915	3,357	50	586	3,993	161	641,040	3.26
Other counties (Fayette, Jackson, Madison, and Winston)	73,584	9,932	.....	.....	83,516	232	.....	36	268	154	41,238	2.03
Total Alabama	10,355,746	539,048	109,524	[1] 57,175	11,061,493	18,339	91	2,680	21,110	180	3,795,822	2.91

ALASKA

Total Alaska	151,656	.....	231	[1] 2,795	154,682	100	.....	44	144	204	29,413	5.26

ARIZONA, GEORGIA, IDAHO, AND OREGON

Total Arizona, Georgia, Idaho, and Oregon	25,636	8,357	50	.....	34,043	82	.....	17	99	122	12,059	2.82

ARKANSAS

Franklin	152,847	2,711	761	2,384	158,703	354	10	51	415	140	58,150	2.73
Johnson	150,111	3,274	60	1,321	154,766	440	.....	84	524	96	50,527	3.06
Logan	394,720	443	710	560	396,433	1,162	.....	182	1,344	111	149,482	2.65
Pope	37,069	1,498	102	6	38,675	152	.....	24	176	105	18,434	2.10
Sebastian	432,493	12,752	90	3,135	448,470	1,107	55	200	1,362	112	153,026	2.93
Total Arkansas	1,167,240	20,678	1,723	[1] 7,406	1,197,047	3,215	65	541	3,821	112	429,619	2.79

COLORADO

Boulder	199,788	374,156	6,777	9,630	590,351	618	.....	113	731	212	154,742	3.82
Delta	26,609	24,151	3,200	1,024	54,984	55	.....	23	78	154	12,014	4.58
El Paso	41,163	180,442	36,121	6,582	264,308	221	.....	39	260	228	59,399	4.45
Fremont	175,007	289,149	4,609	2,247	471,012	705	.....	134	839	187	156,503	3.01
Garfield	19,582	24,260	705	365	44,912	37	.....	8	45	239	10,738	4.18
Gunnison	484,422	16,980	8,455	12,214	522,071	529	.....	103	632	169	106,936	4.88
Huerfano	524,475	61,478	3,855	1,859	591,667	815	.....	203	1,018	163	165,945	3.57
Jefferson	106,478	50,087	1,134	2,516	160,215	115	.....	27	142	211	29,950	5.35
La Plata	13,120	18,926	167	320	32,533	44	.....	9	53	185	9,791	3.32
Las Animas	649,788	52,207	3,994	[2] 97,659	803,648	1,321	.....	225	1,546	144	223,335	3.60
Mesa	21,023	40,975	586	2,532	65,116	91	.....	16	107	180	19,309	3.37
Moffat	14,886	18,359	1,960	.....	35,205	24	.....	4	28	242	6,765	5.20
Rio Blanco	.....	4,198	56	.....	4,254	7	.....	.....	7	209	1,462	2.91
Routt	685,874	20,304	4,653	30,600	741,431	1,001	.....	300	1,301	127	165,724	4.47
Weld	926,548	255,666	12,771	36,396	1,231,371	1,267	.....	165	1,432	183	262,310	4.69
Other counties (northern) (Elbert, Jackson, and Larimer)	9,824	9,181	170	732	19,907	14	10	4	28	196	5,487	3.63
Other counties (southern) (Montezuma, Montrose, and Pitkin)	530	28,206	1,423	.....	30,159	33	.....	5	38	255	9,678	3.12
Total Colorado	3,899,117	1,468,725	90,636	[3] 204,666	5,663,144	6,897	10	1,378	8,285	169	1,400,088	4.04

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

ILLINOIS

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Bureau	1,603	52,442	2,288	2,758	59,091	236	7	18	261	115	29,979	1.97
Christian	3,628,051	116,371	11,436	17,760	3,773,618	1,839	-------	583	2,422	165	398,664	9.47
Clinton	27,713	89,182	2,603	8,724	128,222	379	-------	57	436	69	30,010	4.27
Edgar	52,571	28,862	200	2,511	84,144	45	16	26	87	129	11,225	7.50
Franklin	7,613,537	65,802	26,328	117,891	7,823,558	4,952	-------	1,556	6,508	142	926,082	8.45
Fulton	2,590,634	330,035	5,417	14,601	2,940,687	655	331	437	1,423	189	269,309	10.92
Gallatin	2,750	47,746	30	3,472	53,998	57	-------	12	69	210	14,502	3.72
Grundy	-------	117,664	512	2,260	120,436	156	19	22	197	151	29,766	4.05
Henry	556,326	103,090	2,105	6,210	667,731	298	70	111	479	192	92,199	7.24
Jackson	1,179,432	102,294	5,660	5,077	1,292,463	575	63	211	849	178	151,152	8.55
Knox	500,631	136,188	1,844	5,747	644,410	211	58	98	367	190	69,740	9.24
La Salle	134,557	204,005	6,014	10,323	354,899	491	102	81	674	180	121,352	2.92
Macoupin	2,918,481	146,126	47,084	126,915	3,238,606	2,009	-------	440	2,449	181	444,013	7.29
Madison	683,524	584,044	13,124	51,172	1,331,864	1,304	-------	260	1,564	148	230,737	5.77
Menard	-------	110,554	676	4,239	115,469	152	-------	30	182	202	36,703	3.15
Mercer	-------	18,863	129	1,027	20,019	66	-------	12	78	150	11,685	1.71
Montgomery	533,892	37,516	5,007	37,767	614,182	469	-------	144	613	117	71,682	8.57
Peoria	889,485	341,558	11,854	2,747	1,245,644	1,406	4	142	1,552	157	243,090	5.12
Perry	2,848,802	62,886	25,288	33,311	2,970,287	800	364	445	1,609	144	231,110	12.85
Randolph	926,154	97,975	8,667	18,322	1,051,118	383	64	175	622	157	97,557	10.77
Rock Island	-------	28,954	348	10	29,312	63	-------	8	71	167	11,836	2.48
St. Clair	795,559	1,377,225	27,252	49,423	2,249,459	1,869	72	439	2,380	146	347,135	6.48
Saline	2,971,723	64,497	13,207	50,927	3,100,354	2,789	85	569	3,443	130	447,224	6.93
Sangamon	1,351,799	533,918	12,865	17,410	1,915,992	2,487	-------	331	2,818	148	416,983	4.59
Schuyler	-------	41,376	182	1,002	42,560	60	8	19	87	219	19,088	2.23
Shelby	-------	6,700	102	26	6,828	29	-------	5	34	194	6,610	1.03
Stark	-------	17,422	17	-------	17,439	37	-------	7	44	211	9,300	1.88

Tazewell	45,338	173,623	247	553	219,761	401		63	464	160	74,312	2.96
Vermilion	1,167,786	271,041	97,372	25,291	1,561,490	1,811	37	242	2,090	138	288,228	5.42
Wabash		9,820	125	130	10,075	21		8	29	143	4,141	2.43
Washington	157,537	62,633	19,589	17,985	257,744	302		72	374	132	49,203	5.24
Williamson	1,716,463	366,753	7,028	37,972	2,128,216	1,538	104	477	2,119	118	250,462	8.50
Other counties [3]	1,268,494	534,287	9,301	30,327	1,842,409	1,327	294	348	1,969	137	269,456	6.84
Total Illinois	34,562,842	6,281,452	363,901	[1] 703,890	41,912,085	29,217	1,698	7,448	38,363	149	5,704,535	[4] 7.35

INDIANA

Clay	713,797	414,942	873	7,822	1,137,434	244	428	208	880	148	129,984	8.75
Daviess		63,139	400	2,494	66,033	66	11	18	95	161	15,252	4.33
Dubois		19,095	150	20	19,265	29		9	38	183	6,970	2.76
Fountain		44,006	67	673	44,746	45		24	69	164	11,330	3.95
Gibson	910,764	111,348	6,193	22,409	1,050,714	614		143	757	147	111,013	9.46
Greene	1,774,539	115,480	8,138	10,215	1,908,372	439	345	275	1,059	163	172,216	11.08
Knox	1,338,212	235,639	6,362	19,369	1,599,582	804	19	232	1,055	153	161,897	9.88
Martin		19,539	85		19,624	42		9	51	178	9,055	2.17
Owen	88,017	4,544			92,561	4	62	38	104	80	8,310	11.14
Parke		113,336	579	4,315	118,230	187		38	225	173	38,908	3.04
Perry		24,083	25	2	24,110	43		7	50	164	8,211	2.94
Pike	2,579,329	46,407	6,266	17,043	2,649,045	134	522	336	992	173	171,161	15.48
Spencer	63,295	17,773	130	120	81,318	20	34	9	63	162	10,207	7.97
Sullivan	1,303,735	63,291	2,714	23,775	1,393,515	1,083	101	258	1,442	119	172,138	8.10
Vermillion	390,987	124,425	991	7,990	524,393	613	51	143	807	103	82,794	6.33
Vigo	2,419,507	167,223	272,707	30,561	2,889,998	1,433	183	384	2,000	166	332,770	8.68
Warrick	842,479	180,542	3,907	4,099	1,031,027	285	179	195	659	154	101,398	10.17
Other counties (Vanderburgh and Warren)	59,292	48,996	12	217	108,517	159		24	183	150	27,370	3.96
Total Indiana	12,483,953	1,813,808	309,599	[1] 151,124	14,758,484	6,244	1,935	2,350	10,529	149	1,570,984	[4] 9.40

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

IOWA

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Adams		21,341	100	105	21,546	117		10	127	146	18,579	1.16
Appanoose	284,829	106,606	1,985	83	393,503	1,403		190	1,593	113	179,447	2.19
Boone	289,930	77,843	5,663	2,082	375,518	773		89	862	162	139,695	2.69
Dallas	280,350	78,352	6,130	1,302	366,134	613		48	661	152	100,220	3.65
Davis and Taylor	202	24,027	529	16	24,774	39	14	5	58	158	9,158	2.71
Greene		19,001		5	19,006	48	15	5	68	68	4,612	4.12
Guthrie		18,462	118	25	18,605	79		8	87	161	13,998	1.33
Jasper		27,841	486	262	28,589	93		12	105	72	7,581	3.77
Jefferson and Keokuk		12,692	203	51	12,946	21	11	6	38	117	4,462	2.90
Lucas	415,432	13,369	4,893	2,135	435,829	672		63	735	148	108,819	4.01
Mahaska	91,466	111,043	2,908	1,391	206,808	81	107	39	227	173	39,380	5.25
Marion	112,468	326,871	2,375	1,264	442,978	659	107	121	887	130	114,884	3.86
Monroe	75,160	59,446	2,693	1,292	138,600	289	3	41	333	133	44,276	3.13
Page		32,247	225	15	32,487	94		13	107	186	19,896	1.63
Polk	62,128	223,043	2,781	2,048	290,000	738		68	806	124	99,889	2.90
Van Buren	64	18,613	223	35	18,935	28	13	9	50	170	8,521	2.22
Wapello	30,407	116,358	160	1,992	148,917	190	12	35	237	161	38,186	3.90
Warren		79,132	40	2,422	81,594	171	23	35	229	105	23,963	3.40
Wayne		18,426	310		18,736	82		10	92	154	14,177	1.32
Webster		27,598	31	53	27,682	44	17	9	70	158	11,052	2.50
Total Iowa	1,642,445	1,412,311	31,853	[1] 16,578	3,103,187	6,234	322	816	7,372	136	1,000,795	3.10

KANSAS

Bourbon	136,102	23,841	236	938	161,117		54	25	79	210	16,589	9.71
Cherokee	479,669	33,001	1,454	1,293	515,417	62	144	89	295	150	44,124	11.68
Crawford	1,693,873	83,747	3,886	7,010	1,788,516	1,044	455	262	1,761	157	276,638	6.47
Labette		10,006	1	650	10,657		15	3	18	179	3,222	3.31
Linn	7,036	19,808		710	27,554	64	8	13	85	122	10,411	2.65
Osage	300	66,630	689		67,619	315	4	43	362	141	50,868	1.33
Other counties (Franklin and Leavenworth)	73,859	9,402			83,261	376		110	486	254	123,263	.68
Total Kansas	2,390,839	246,435	6,266	[1] 10,601	2,654,141	1,861	680	545	3,086	170	525,115	5.05

KENTUCKY

Usage	300	66,630	659		67,619	315						
Other counties (Franklin and Leavenworth)	73,859	9,402			83,261	376		110	486	254	123,263	.65
Total Kansas	2,390,839	246,435	6,266	10,601	2,654,141	1,861	680	545	3,086	170	525,115	5.05
KENTUCKY												
Eastern district:												
Bell	1,620,438	73,125	68,175	6,116	1,767,854	2,332		359	2,691	176	474,382	3.73
Boyd	6,222	16,823	300		23,345	99		17	116	125	14,519	1.61
Breathitt	5,587	3,636	31,901	362	41,486	132		23	155	113	17,582	2.36
Carter		38,214			38,214	66		11	77	180	13,830	2.76
Clay	145,200	12,463	1,056		158,719	273		46	319	193	61,516	2.58
Floyd	4,035,311	1,767	10,921	15,722	4,063,721	4,558		768	5,326	173	921,803	4.41
Greenup		3,565			3,565	13		3	16	59	950	3.75
Harlan	10,734,586	17,103	67,933	12,502	10,832,124	12,075		1,601	13,676	179	2,454,104	4.41
Jackson		142,213		3,745	145,958	344		64	408	174	71,153	2.05
Johnson	732,389	1,515	5,398	5,308	744,590	1,045		132	1,177	155	182,659	4.08
Knott	174,679		1,174		175,853	384		59	443	72	31,870	5.52
Knox	533,795		3,233	2,190	539,218	614		106	720	210	151,010	3.57
Laurel		33,829			33,829	98		17	115	221	25,420	1.33
Lee		12,706	35	10	12,751	41		7	48	133	6,394	1.99
Letcher	3,654,423	1,060	29,680	3,547	3,688,710	4,696		582	5,278	160	843,976	4.37
Magoffin	67,697	846	757		69,300	108		19	127	145	18,352	3.78
Martin	187,504		159		187,663	244		41	285	104	29,745	6.31
Perry	3,545,557	3,371	91,023		3,639,951	4,243		797	5,040	141	710,139	5.13
Pike	4,034,429	26,367	24,890	6,078	4,091,764	4,401		650	5,051	169	853,496	4.79
Pulaski		21,618			21,618	38		7	45	140	6,295	3.43
Rockcastle		17,653	30		17,683	41		9	50	128	6,423	2.75
Whitley	222,565	370	2,607	7,965	233,507	554		106	660	123	81,233	2.87
Other counties (Elliott, McCreary, Morgan, Owsley, Wayne, and Wolfe)	621,915	14,590	9,544		646,049	818		130	948	146	138,640	4.66
Total Eastern	30,322,277	442,834	348,816	63,545	31,177,472	37,217		5,554	42,771	166	7,115,491	4.38
Western district:												
Christian	28,177	26,182	161		54,520	97	11	20	128	102	13,109	4.16
Daviess		75,586	228	2,022	77,836	116		23	139	131	18,164	4.29
Henderson	13,419	80,874	5,299	11,764	111,356	180		45	225	145	32,583	3.42
Hopkins	3,043,181	167,095	58,910	12,990	3,282,176	2,670	49	534	3,253	151	490,365	6.69
Muhlenberg	1,783,532	80,238	10,700	32,088	1,906,558	2,502		434	2,936	121	356,667	5.35
Ohio	204,192	19,509	3,791	844	228,336	392		68	460	98	44,873	5.09
Union	443,102	95,334	17,098	18,669	574,203	620		106	726	141	102,324	5.61
Webster	1,072,358	32,619	5,092	2,724	1,112,793	1,239		204	1,443	113	163,716	6.80
Other counties (Butler, Hancock, and McLean)	274	19,516	20	158	19,968	63		19	82	173	14,200	1.41
Total Western	6,588,235	596,953	101,299	81,259	7,367,746	7,879	60	1,453	9,392	132	1,236,001	5.96
Total Kentucky	36,910,512	1,039,787	450,115	144,804	38,545,218	45,096	60	7,007	52,163	160	8,351,492	4.62

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

MARYLAND

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Allegany	593,859	165,657	5,476	844	765,836	1,338	-------	178	1,516	170	258,330	2.96
Garrett	456,968	49,160	3,172	6,277	515,577	745	-------	110	855	172	146,879	3.51
Total Maryland	1,050,827	214,817	8,648	[1] 7,121	1,281,413	2,083	-------	288	2,371	171	405,209	3.16

MICHIGAN

Bay	45,500	49,468	2,571	6,308	103,937	288	-------	24	312	132	41,145	2.53
Saginaw	6,037	100,460	1,798	9,388	117,683	280	-------	35	315	176	55,463	2.12
Other counties (Shiawassee and Tuscola)	114,516	142,644	4,609	11,092	272,861	531	-------	47	578	172	99,217	2.75
Total Michigan	166,143	292,572	8,978	[1] 26,788	494,481	1,099	-------	106	1,205	163	195,825	2.53

MISSOURI

Adair	60,563	93,970	2,400	2,832	159,765	311	-------	51	362	172	62,378	2.56
Audrain, Lincoln, Montgomery, and Warren	-------	5,676	10	80	5,766	21	2	5	28	98	2,736	2.11
Barton	228,003	16,038	257	1,285	245,583	5	125	53	183	106	19,405	[2] 12.66
Bates	574,883	9,579	168	1,573	586,203	27	162	71	260	152	39,442	[2] 14.86
Boone	-------	12,407	32	4	12,443	33	6	9	48	119	5,730	2.17
Callaway	-------	112,896	10	400	113,306	-------	44	8	52	233	12,140	[2] 9.33
Chariton, Monroe, and Schuyler	-------	9,131	127	56	9,314	38	4	9	51	178	9,090	1.02
Clay	-------	78,753	1,363	1,812	81,928	313	-------	50	363	128	46,593	1.76
Dade, Jasper, and St. Clair	-------	8,847	15	510	9,372	6	7	7	20	203	4,068	2.30

Harrison	1,882	24,960	580	3,502	30,622	140		18	168	142	22,481	1.36	
Henry		12,883	189	628	13,670	46		13	59	156	9,231	1.48	
Johnson and Morgan	492,473	82,057	870	6,815	582,215	28	203	83	314	165	51,859	[6] 11.23	
Lafayette		11,944		633	12,577		13	6	19	187	3,552	3.54	
Linn	177,907	75,110	3,620	3,508	260,145	965		71	1,036	139	144,483	1.80	
Macon	17,395	58,706	406	28	76,535	302		55	357	176	62,710	1.22	
Putnam	441,179	24,434	3,262	1,906	470,781	123	61	63	247	178	44,066	[6] 10.68	
Ralls		28,615	200	48	28,863	119		17	136	131	17,865	1.62	
Randolph		14,660	25	10	14,695	34	4	8	46	221	10,154	1.45	
Ray	380,012	68,312	4,007		452,331	255	72	80	407	201	81,731	[6] 5.53	
Vernon	100,739	98,367	6,624	343	206,073	856		92	948	129	122,494	1.68	
	20,016	40,618	358	2,939	63,931	55	47	17	119	126	15,012	[6] 4.26	
Total Missouri [4]	2,494,752	888,002	24,452	[1] 28,912	3,436,118	3,677	750	786	5,213	151	787,220	4.36	

MONTANA

Blaine and Phillips		12,616			12,616	24		5	29	180	5,226	2.41
Carbon	298,433	29,476	2,742	467	331,118	180		82	262	183	47,867	6.92
Cascade	445,972	42,542	2,073		490,587	288		42	330	191	62,883	7.80
Chouteau		8,001	20		8,021	21		5	26	197	5,110	1.57
Daniels, McCone, and Valley [7]		8,760	20	4	8,784	7	4	1	12	205	2,464	3.56
Dawson [7]		1,428	10		1,438	5		1	6	86	515	2.79
Flathead and Pondera	30	4,114	17	100	4,261	19		4	23	142	3,274	1.30
Hill		8,693	45		8,738	24		5	29	213	6,178	1.41
Musselshell and Rosebud	1,775,771	31,982	5,089	2,865	1,815,707	482	33	180	704	163	114,503	[6] 15.86
Richland [7]	3,939	8,272	700		12,911	22	3	5	30	156	4,688	2.75
Roosevelt [7]		6,582	972	5	7,559	10		4	14	145	2,033	3.72
Sheridan [7]		14,204	893	59	15,156	18		7	25	172	4,289	3.53
Other lignite counties (Custer and Wibaux) [7]		7,697			7,697	5		1	6	182	1,092	7.05
Other bituminous counties (Gallatin, Park, Powder River, and Stillwater)		6,924	419	114	7,457	21		8	29	195	5,662	1.32
Total Montana	2,524,145	191,291	13,000	[1] 3,614	2,732,050	1,126	40	359	1,525	174	265,784	10.28

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

NEW MEXICO

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Colfax	604,898	24,025	4,966	2,641	636,530	808	-------	191	999	138	137,540	4.63
McKinley	393,577	43,730	5,176	24,208	466,691	853	-------	215	1,068	167	178,395	2.62
Rio Arriba	15,747	4,469	129	-------	20,345	23	-------	9	32	232	7,427	2.74
Other counties (Bernalillo, Sandoval, Santa Fe, San Juan, and Socorro)	89,550	14,875	3,308	7,738	115,471	284	-------	91	375	146	54,649	2.11
Total New Mexico	1,103,772	87,099	13,579	[1] 34,587	1,239,037	1,968	-------	506	2,474	153	378,011	3.28

NORTH DAKOTA (LIGNITE) [2]

Adams	14,207	25,860	1,600	15	41,682	59	2	23	84	139	11,654	3.58
Billings, Golden Valley, and Slope	-------	4,496	125	-------	4,621	5	6	5	16	149	2,380	1.94
Bowman	68	5,636	-------	-------	5,704	7	2	2	11	138	1,515	3.77
Burke	184,442	53,822	60	100	238,424	-------	49	33	82	168	13,812	[3] 17.26
Burleigh	199,326	28,063	24	20	227,433	33	30	21	84	226	19,002	[3] 11.97
Divide	153,765	8,114	3,800	702	166,381	12	39	17	68	168	11,455	[3] 14.52
Dunn	-------	3,153	100	100	3,353	-------	5	1	6	125	750	4.47
Grant	5,151	17,176	108	600	23,035	16	4	5	25	148	3,700	6.23
Hettinger	420	16,271	614	210	17,515	7	17	7	31	155	4,809	3.64
McKenzie	-------	5,549	-------	-------	5,549	3	8	4	15	156	2,340	2.37
McLean	103,611	22,477	2,523	188	128,799	80	54	27	161	134	21,563	5.97
Mercer	463,044	2,352	77,674	2,310	545,380	149	60	107	316	175	55,195	9.88
Morton	8,580	17,038	130	2,626	28,374	19	14	11	44	127	5,575	5.09
Mountrail	-------	12,975	-------	21	12,996	19	5	4	28	195	5,470	2.38
Oliver	-------	7,490	87	70	7,647	-------	14	4	18	95	1,711	4.47
Stark	60	17,168	73,052	652	90,932	57	-------	6	63	239	15,046	6.04
Ward	331,930	121,470	178	97	453,675	152	29	62	243	208	50,648	[3] 8.96
Williams	770	47,794	-------	35	48,599	49	6	20	75	148	11,126	4.37
Total North Dakota	1,465,374	416,904	160,075	[1] 7,746	2,050,099	667	344	359	1,370	174	237,751	8.62

Athens	1,544,872	16,273	7,375	17,078	1,585,598	4,048		432	4,480	84	375,943	4.22	
Belmont	5,405,411	149,411	57,058	16,572	5,628,452	7,107		734	7,841	156	1,223,162	4.60	
Carroll	89,725	179,139	15,808	185	284,857	328	42	39	409	169	68,983	4.13	
Columbiana	89,893	269,211	685	8,308	368,097	304	102	52	458	174	79,581	4.63	
Coshocton	32,126	141,541	766	819	175,252	225	15	41	281	174	48,912	3.58	
Gallia	240	26,165	40		26,445	44		8	52	186	9,690	2.73	
Guernsey	484,053	65,905	4,272	1,080	555,310	823		87	910	131	119,511	4.65	
Harrison	1,778,444	29,178	1,341	12,118	1,821,081	1,127	83	295	1,505	196	294,254	6.19	
Hocking	94,956	113,848	413		209,217	286	4	49	339	143	48,405	4.32	
Holmes		30,861	40	80	30,981	39	9	7	55	199	10,951	2.83	
Jackson	78,439	73,152	63,872		210,463	212	31	37	280	180	50,482	4.17	
Jefferson	3,627,362	306,739	9,616	23,781	3,967,498	3,472	280	607	4,359	174	758,986	5.23	
Mahoning		52,576	10,686	25	63,287	117		22	139	183	25,497	2.48	
Medina	11,128	239,945	3,806	3,774	258,653	154	52	31	237	226	53,524	4.83	
Meigs		6,683	134	186	7,003	12		3	15	176	2,637	2.66	
Morgan and Washington	42,528	59,707	822		103,057	122		26	148	201	29,805	3.46	
Muskingum	75,141	13,452	312		88,905	434		38	472	62	29,192	3.05	
Perry	700,818	214,668	1,717	39	917,242	716	23	107	846	205	173,762	5.28	
Stark	545,544	195,343	6,872	275	748,034	1,350	27	181	1,558	129	201,490	3.71	
Summit	31,020	404,863	14,119	660	450,662	331	111	72	514	177	90,948	4.96	
Tuscarawas		10,668			10,668	25		4	29	134	3,890	2.74	
Vinton	87,114	609,873	121,756	8,488	827,231	1,272	83	215	1,570	138	216,289	3.82	
Wayne	10,321	59,753	6,098	195	76,367	57	53	29	139	140	19,469	3.92	
Other counties (Noble and Portage)		19,725		100	19,825	49		7	56	167	9,370	2.12	
Total Ohio	124,563	22,729	1,625	7,836	156,753	652	5	44	701	57	39,620	3.96	
	14,848,698	3,311,408	328,913	[1] 101,590	18,590,618	23,306	920	3,167	27,393	145	3,984,353	4.67	
OKLAHOMA													
Coal		13,171	127	14	13,312	44		11	55	143	7,885	1.69	
Haskell and Le Flore	334,186	3,763	333	3,248	341,530	827	21	164	1,012	119	120,723	2.83	
Latimer	3,927	2,020	36	170	6,153	35		6	41	71	2,921	2.11	
Muskogee	3,209	6,067	60	250	9,586	18	12	7	37	98	3,635	2.64	
Okmulgee	204,923	17,928	418	1,046	224,315	347		54	401	140	56,116	4.00	
Pittsburg	170,202	22,092	689	5,986	198,969	398		72	470	172	80,740	2.46	
Tulsa	30,846	6,270	141	25	37,282	80		16	96	154	14,825	2.51	
Other counties (Craig, Rogers, and Wagoner)	377,565	32,264	1,001	2,755	413,585	7	167	43	217	169	36,626	[2] 11.29	
Total Oklahoma	1,124,858	103,575	2,805	[1] 13,494	1,244,732	1,756	200	373	2,329	139	323,471	3.85	

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued.

PENNSYLVANIA (BITUMINOUS)

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Allegheny	9,248,431	1,763,612	907,845	68,673	11,988,541	11,714	77	1,746	13,537	178	2,406,107	4.98
Armstrong	2,296,145	45,267	42,493	737	2,384,642	3,396		475	3,871	147	568,279	4.20
Beaver	158,007	253,234	388	4,663	416,292	161	148	58	367	185	67,866	6.13
Bedford	65,835	72,094	181,706	631	320,266	539		78	617	151	93,235	3.44
Blair	61,227	60,721	946		122,894	274		32	306	153	46,756	2.63
Butler	275,296	264,308	6,205	3,109	548,918	1,283	5	182	1,470	126	184,825	2.97
Cambria	10,843,998	394,448	919,115	[1] 175,464	12,333,025	17,073		2,378	19,451	164	3,197,957	3.86
Center	218,625	95,060	18,867	160	323,712	600		101	701	147	102,728	3.15
Clarion	1,108,520	110,889	16,696	40	1,236,145	1,402	20	170	1,592	208	330,554	3.74
Clearfield	2,243,963	180,197	42,454	22,421	2,459,035	4,232	8	508	4,748	153	725,666	3.39
Clinton		33,323	203	38	33,564	52		7	59	212	12,504	2.68
Crawford and Venango		31,344			31,344	47	10	8	65	163	10,606	2.96
Elk	579,161	32,409	6,042	17,225	634,837	869	2	138	1,009	184	185,250	3.43
Fayette	9,484,997	176,743	69,586	[1] 364,505	10,095,831	12,219	77	1,836	14,132	139	1,970,868	5.12
Greene	3,437,320	4,543	18,101	13,810	3,474,274	3,150		577	3,727	168	626,125	5.55
Huntingdon	325,865	59,865	3,046	6,299	395,075	844		74	918	145	132,787	2.98
Indiana	5,209,761	38,359	230,900	[1] 197,777	5,676,797	6,492		732	7,224	173	1,247,072	4.55
Jefferson	1,765,703	83,508	4,660	10,329	1,864,200	2,295	5	376	2,676	175	468,409	3.98
Lawrence	168,434	31,384	2,311	481	202,610	438	4	60	502	155	77,878	2.60
Lycoming	11,324	49,813	280	469	61,886	118	2	19	139	185	25,667	2.41
Mercer	102	109,108	583	1,967	111,760	252	10	41	303	172	52,126	2.14
Somerset	3,717,196	84,651	31,245	62,152	3,895,244	6,112		884	6,996	136	953,147	4.09
Tioga	106,742	77,929	1,691	3,997	189,359	334	18	68	420	152	63,861	2.97
Washington	12,086,834	261,806	224,265	22,740	12,595,645	16,259	225	1,848	18,332	153	2,796,424	4.50
Westmoreland	5,215,985	485,759	159,800	[1] 307,980	6,169,524	8,683		1,402	10,085	128	1,292,518	4.77
Other counties (Bradford, Fulton, and McKean)	128,045	7,194	966	2,912	139,117	229	2	21	252	159	40,036	3.47
Total Pennsylvania	68,757,016	4,768,568	2,890,374	[1] 1,288,579	77,704,537	99,067	613	13,819	113,499	156	17,679,250	4.40

Corson, Dewey, and Harding	27,148	15,826	190	.....	43,164	5	20	7	32	199	6,353	6.79
Meade	.....	1,076	100	.....	1,176	6	.....	2	8	93	740	1.59
Perkins	.....	3,668	50	.....	3,718	7	3	.....	10	141	1,414	2.63
Total South Dakota	27,148	20,570	340	.....	48,058	18	23	9	50	170	8,507	5.65
TENNESSEE												
Anderson	825,241	48,697	5,551	7,178	886,667	1,215	.....	197	1,412	166	234,514	3.78
Campbell	1,177,409	27,000	19,932	967	1,225,308	1,940	.....	315	2,255	167	375,925	3.26
Claiborne	831,061	24,177	10,993	2,883	869,114	1,357	.....	203	1,560	143	223,071	3.90
Cumberland	.....	8,124	15	175	8,314	21	.....	5	26	172	4,471	1.86
Fentress	214,921	5,825	2,927	5,876	229,549	391	.....	99	490	146	71,475	3.21
Hamilton	.....	23,915	.....	.....	23,915	64	.....	11	75	177	13,279	1.80
Marion	359,588	38,309	3,019	1,030	401,946	588	.....	115	703	181	126,962	3.17
Morgan	240,177	20,750	2,410	8,696	272,033	600	.....	94	694	239	165,845	1.64
Overton	.....	13,831	.....	.....	13,831	29	.....	4	33	171	5,658	2.44
Scott	86,659	20,560	821	2,588	110,628	159	4	26	189	205	38,743	2.86
Van Buren	661	13,110	.....	156	13,927	38	.....	7	45	126	5,679	2.45
Other northeastern counties (Putnam and Roane)	3,345	15,791	.....	.....	19,136	37	.....	7	44	220	9,667	1.98
Other southeastern counties (Bledsoe, Grundy, Rhea, Sequatchie, and White)	320,944	60,795	5,167	[9] 11,129	398,035	655	.....	85	740	146	108,198	3.68
Total Tennessee	4,060,006	320,884	50,835	[9] 40,678	4,472,403	7,094	4	1,168	8,266	167	1,383,487	3.23
TEXAS												
Bituminous:												
Palo Pinto, Webb, and Wise	20,413	7,590	42	4,421	32,466	199	.....	71	270	149	40,282	.81
Lignite:												
Bastrop and Milam	104,718	3,800	1,000	761	110,279	88	22	12	122	150	18,266	6.04
Henderson, Titus, and Wood	708,378	17,502	5,245	4,815	735,940	358	.....	26	384	241	92,502	7.96
Total lignite	813,096	21,302	6,245	5,576	846,219	446	22	38	506	219	110,768	7.64
Total Texas	833,509	28,892	6,287	[1] 9,997	878,685	645	22	109	776	195	151,050	5.82

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

UTAH

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Carbon	2,288,757	180,155	16,996	[10] 19,907	2,505,815	1,961	.....	611	2,572	157	403,616	6.21
Emery	255,869	88,795	1,480	2,023	348,167	270	.....	99	369	138	50,885	6.84
Sanpete and Sevier	.....	7,095	5	.....	7,100	10	.....	6	16	155	2,487	2.85
Summit	7,540	24,886	141	.....	32,567	29	.....	8	37	253	9,352	3.48
Other counties (Grand, Iron, and Uintah)	39,756	13,144	320	82	53,302	68	.....	14	82	[illegible]	13,393	3.98
Total Utah	2,591,922	314,075	18,942	[10] 22,012	2,946,951	2,338	.....	738	3,076	156	479,733	6.14

VIRGINIA

Buchanan	3,731,544	4,865	5,941	120	3,742,470	3,209	.....	406	3,615	189	684,298	5.47
Dickenson	1,355,970	6,926	6,863	747	1,370,506	1,543	.....	246	1,789	225	402,324	3.41
Lee	943,814	32,922	10,684	401	987,821	1,454	.....	261	1,715	163	278,913	3.54
Montgomery and Pulaski [11]	109,642	23,384	1,441	5,265	139,732	400	.....	127	527	135	71,058	1.97
Russell and Scott	430,904	69,117	5,222	4,311	509,554	892	.....	124	1,016	140	142,567	3.57
Tazewell	2,726,515	47,952	20,271	5,711	2,800,449	3,045	.....	547	3,592	205	736,023	3.80
Wise	2,428,271	35,081	22,035	[12] 247,117	2,732,504	4,016	.....	491	4,507	134	602,917	4.53
Total Virginia	11,726,660	220,247	72,457	[13] 263,672	12,283,036	14,559	.....	2,202	16,761	174	2,918,100	4.21

WASHINGTON

King	339,213	259,568	4,499	1,405	604,685	853	.....	250	1,103	166	182,699	3.31
Kittitas	630,092	33,265	7,744	12,282	683,383	780	.....	280	1,060	162	171,753	3.98
Lewis	8,791	22,679	72	443	31,985	43	.....	10	53	134	7,099	4.51
Pierce	19,827	17,004	240	100	37,171	64	.....	13	77	165	12,734	2.92
Other counties (Thurston and Whatcom)	151,986	50,733	1,326	5,704	209,749	250	.....	48	298	164	48,834	4.30
Total Washington	1,149,909	383,249	13,881	[1] 19,934	1,566,973	1,990	.....	601	2,591	163	423,119	3.7[illegible]

Barbour	1,196,417	6,788	2,104	90	1,205,399	1,265	.....	138	1,423	152	215,846	5.58
Boone	2,752,576	3,887	14,647	631	2,771,741	2,885	.....	436	3,321	161	535,074	5.18
Braxton and Gilmer	4,209	5,039	10,069	4	19,341	58	.....	12	70	69	4,831	4.00
Brooke	303,042	131,002	661,268	109	1,095,421	1,027	30	157	1,214	140	170,494	6.42
Clay	661,422	1,469	20,274	17,981	701,146	698	.....	152	850	184	156,092	4.49
Fayette	10,252,273	15,047	152,012	[13] 285,127	10,704,459	10,533	.....	1,551	12,084	206	2,486,347	4.31
Grant	.....	21,405	88	73	21,566	57	.....	9	66	242	16,001	1.35
Greenbrier	1,403,696	30,615	9,490	221	1,444,022	1,628	.....	233	1,861	155	288,913	5.00
Hancock	35,313	99,834	87	5	135,239	52	26	22	100	232	23,193	5.83
Harrison	3,077,742	20,527	57,237	5,144	3,160,650	2,294	.....	384	2,678	164	439,563	7.19
Kanawha	5,767,708	58,406	55,661	5,404	5,887,179	6,144	.....	770	6,914	185	1,277,327	4.61
Lewis	.....	3,768	7,144	.....	10,912	13	.....	4	17	228	3,880	2.81
Lincoln and Wayne	.....	23,149	6	.....	23,155	40	.....	7	47	179	8,400	2.76
Logan	11,841,896	5,772	97,038	10,041	11,954,747	9,300	.....	1,877	11,177	171	1,907,852	6.27
McDowell	15,217,558	48,442	192,294	86,057	15,544,351	15,446	.....	3,272	18,718	160	2,988,616	5.20
Marion	6,484,473	25,828	212,548	39,400	6,762,249	5,327	.....	819	6,146	176	1,079,801	6.26
Marshall	253,717	73,180	123,638	2,077	452,612	569	.....	99	668	142	94,543	4.79
Mason	11,772	67,845	886	3,748	84,251	163	.....	22	185	156	28,905	2.91
Mercer	2,540,152	5,044	23,756	1,232	2,570,184	3,045	.....	718	3,763	155	583,911	4.40
Mineral	195,604	28,310	1,990	80	225,984	386	.....	62	448	186	83,528	2.71
Mingo	2,999,420	3,193	28,535	28	3,031,176	2,767	.....	453	3,220	162	522,480	5.80
Monongalia	5,291,800	24,621	18,176	71	5,334,668	3,120	.....	671	3,791	179	680,000	7.85
Nicholas	1,636	23,857	191	448	26,132	57	.....	10	67	123	8,267	3.16
Ohio	1,334,264	118,778	220	190	1,453,452	1,341	.....	128	1,469	258	379,151	3.83
Preston	310,235	18,560	12,975	[13] 7,938	349,708	840	.....	111	951	95	90,217	3.88
Putnam	573,554	4,266	4,490	179	582,489	614	.....	83	697	250	174,233	3.34
Raleigh	12,562,489	44,492	111,676	56,603	12,775,260	12,582	.....	2,016	14,598	188	2,739,523	4.66
Randolph	810,809	36,176	4,518	17,020	868,523	927	.....	168	1,095	163	178,684	4.86
Taylor	396,091	14,486	994	73	410,644	616	.....	74	690	125	86,328	4.76
Tucker	385,207	1,283	6,360	16,358	409,208	460	.....	58	518	167	86,745	4.72
Upshur	30,816	4,569	122	1,409	36,916	178	.....	45	223	41	9,173	4.02
Webster	894,240	3,817	1,296	1,647	901,000	980	.....	156	1,136	175	199,314	4.52
Wyoming	2,284,259	11,828	18,039	20,262	2,334,388	2,440	.....	394	2,834	189	535,471	4.36
Total West Virginia	89,873,390	985,303	1,849,829	[13] 579,650	93,288,172	87,852	56	15,131	103,039	175	18,082,703	5.16

See footnotes at end of table.

TABLE 25.—*Production, men employed, days operated, and output per man per day at bituminous-coal mines in specified States and counties in 1938*—Continued

WYOMING

County	Net tons					Number of employees				Average number of days mines operated	Man-days of labor	Average tons per man per day
	Loaded at mines for shipment by rail or water	Shipped by truck or wagon	Coal used by employees or taken by locomotives at tipple or other uses at mines	Used for power and heat or made into coke at mines	Total quantity	Underground	Surface		Total			
							In strip pits	All others				
Carbon	528,594	37,350	3,155	20,445	589,544	246	13	108	367	221	80,957	7.28
Converse		10,952			10,952	2	10	2	14	187	2,624	4.17
Fremont	22,663	10,796	121	4,733	38,313	28		10	38	115	4,358	8.79
Hot Springs	37,947	15,951	1,187	6,659	61,744	183		54	237	103	24,507	2.52
Johnson		7,639			7,639	10		3	13	187	2,428	3.15
Lincoln	377,609	35,982	3,819	9,080	426,490	461		101	562	154	86,497	4.93
Sheridan	558,790	63,321	2,992	2,481	627,584	274		92	366	162	59,137	10.61
Sweetwater	3,230,729	8,223	21,574	55,285	3,315,811	2,248		518	2,766	190	526,068	6.30
Uinta	7,978	8,484	114	68	16,644	16		5	21	277	5,817	2.86
Other counties (Campbell, Natrona, and Teton)	86,571	15,303	562	6,720	109,156	6	21	12	39	243	9,486	11.51
Total Wyoming	4,850,891	214,001	33,524	[1] 105,471	5,203,877	3,474	44	905	4,423	181	801,879	6.49

[1] No coal was made into beehive coke at mines in 1938.
[2] Includes 84,172 tons made into beehive coke at mines in Las Animas County, Colo., in 1938.
[3] Other counties include Adams, Bond, Crawford, Greene, Hancock, Jasper, Livingston, Logan, Macon, Marion, Marshall, Morgan, Putnam, Warren, White, Will, and Woodford.
[4] Much of the output of the State is obtained from strip pits or by the use of loading machines, in which types of operations the production per man per day is large.
[5] Production of Home Riverside and Alston mines is credited to Missouri rather than to Kansas.
[6] The output is obtained chiefly from strip pits in which the production per man per day is large.
[7] Data on lignite compiled by L. Mann, Bureau of Mines: see Lignite tables, 1938.
[8] Includes coal made into beehive coke at mines in the following counties in Pennsylvania in 1938: Cambria, 38,777; Fayette, 333,216; Indiana, 121,489; and Westmoreland, 271,771—a grand total of 765,253 tons.
[9] Includes 10,000 tons made into beehive coke at mines in Grundy County, Tenn., in 1938.
[10] Includes 15,667 tons made into beehive coke at mines in Carbon County, Utah, in 1938.
[11] Figures compiled by L. Mann, Bureau of Mines; see Anthracite and Semianthracite Outside of Pennsylvania tables, 1938.
[12] Includes 234,765 tons made into beehive coke at mines in Wise County, Va., in 1938.
[13] Includes 250,019 tons made into beehive coke at mines in Fayette and Preston Counties, W. Va., in 1938.

STATISTICS OF LIGNITE AND OF ANTHRACITE AND SEMI-ANTHRACITE OUTSIDE OF PENNSYLVANIA [4]

PRODUCTION OF LIGNITE

In addition to the study of Pennsylvania anthracite, the Bureau of Mines canvasses the operators of lignite properties included in the areas mapped as "lignite" in Geological Survey Professional Paper 100–A, The Coal Fields of the United States. Subbituminous coal, sometimes known as "black lignite," is not included.

Fewer lignite mines were active in 1938 than in 1937, and output, number of employees, and days of operation decreased. The length of the working day in most mines was 8 hours, but many smaller operations failed to reply to the request for this information. Mechanical loading underground was not practiced to any extent, as only one or two operators in North Dakota recorded the use of mobile loaders in the year. No labor disturbances were reported.

Detailed data of production in 1938 are presented in the following tables. An historical table of world output of lignite is also given.

TABLE 26.—*Summary of production, value, men employed, days operated, man-days of labor, and output per man per day at lignite mines in the United States in 1938, by States* [1]

State	Net tons					Value	
	Loaded at mines for shipment	Commercial sales by truck or wagon	Other sales to local trade, used by employees, or taken by locomotives at tipple	Used at mines for power and heat	Total quantity	Total (thousands of dollars)	Average per ton
Montana	3,939	46,943	2,595	68	53,545	88	$1.64
North Dakota	1,465,374	416,904	160,075	7,746	2,050,099	2,380	1.16
South Dakota	27,148	20,570	340	----------	48,058	65	1.35
Texas	813,096	21,302	6,745	5,576	846,219	679	.80
Total: 1938	2,309,557	505,719	169,255	13,390	2,997,921	3,212	1.07
1937	2,437,702	569,266	195,600	15,851	3,218,419	3,477	1.08

State	Number of employees				Average number of days mines operated	Man-days of labor [2]	Average tons per man per day [2]
	Underground	Surface		Total			
		In strip pits	All others				
Montana	67	7	19	93	162	15,081	3.55
North Dakota	667	344	359	1,370	174	237,751	8.62
South Dakota	18	23	9	50	170	8,507	5.65
Texas	446	22	38	506	219	110,768	7.64
Total: 1938	1,198	396	425	2,019	184	372,107	8.06
1937	1,239	462	429	2,130	189	403,510	7.98

[1] Includes 212 active mines of commercial size; excludes wagon mines producing less than 1,000 tons.

[2] Based upon the "reported" number of man-shifts where the operator keeps a record thereof; otherwise upon the "calculated" number of man-shifts obtained by multiplying the average number of men employed underground and on the surface at each mine by the number of days worked by the mine and tipple, respectively. Using the "calculated" man-shifts throughout as developed before the year 1932, the average output per man per day was 8.51 in 1937 and 8.59 in 1938.

[4] Compiled by L. Mann, Coal Economics Division, Bureau of Mines.

TABLE 27.—*Production, value, men employed, days operated, man-days of labor, and output per man per day at lignite mines in the United States in 1938, by States and counties*

MONTANA

County	Net tons					Value		Number of employees				Average number of days mines operated	Man-days of labor [1]	Average tons per man per day [1]
	Loaded at mines for shipment	Commercial sales by truck or wagon	Other sales to local trade, used by employees, or taken by locomotives at tipple	Used at mines for power and heat	Total quantity	Total (thousands of dollars)	Average per ton	Underground	Surface		Total			
									In strip pits	All others				
Daniels, McCone, and Valley		8,760	20	4	8,784	17	$1.94	7	4	1	12	205	2,464	3.56
Dawson		1,428	10		1,438	2	1.39	5		1	6	86	515	2.79
Richland	3,939	8,272	700		12,911	25	1.94	22	3	5	30	156	4,688	2.75
Roosevelt		6,582	972	5	7,559	10	1.32	10		4	14	145	2,033	3.72
Sheridan		14,204	893	59	15,156	23	1.52	18		7	25	172	4,289	3.53
Other counties (Custer and Wibaux)		7,697			7,697	11	1.43	5		1	6	182	1,092	7.05
Total: 1938	3,939	46,943	2,595	68	53,545	88	1.64	67	7	19	93	162	15,081	3.55
1937	4,000	49,299	910	102	54,311	92	1.69	63	6	12	81	167	13,567	4.00

NORTH DAKOTA

Adams	14,207	25,860	1,600	15	41,682	56	1.34	39	2	23	84	139	11,654	3.58
Billings, Golden Valley, and Slope		4,496	125		4,621	6	1.30	5	6	5	16	149	2,380	1.94
Bowman	68	5,636			5,704	8	1.40	7	2	2	11	138	1,515	3.77
Burke	184,442	53,822	60	100	238,424	269	1.13		49	33	82	168	13,812	[2] 17.26
Burleigh	199,326	28,063	24	20	227,433	274	1.20	33	30	21	84	226	19,002	[2] 11.97
Divide	153,765	8,114	3,800	702	166,381	206	1.24	12	39	17	68	168	11,455	[2] 14.52
Dunn		3,153	100	100	3,353	4	1.19		5	1	6	125	750	4.47
Grant	5,151	17,176	108	600	23,035	29	1.26	16	4	5	25	148	3,700	6.23
Hettinger	420	16,271	614	210	17,515	21	1.20	7	17	7	31	155	4,809	3.64
McKenzie		5,549			5,549	8	1.44	3	8	4	15	156	2,340	2.37
McLean	103,611	22,477	2,523	188	128,799	186	1.44	80	54	27	161	134	21,563	5.97
Mercer	463,044	2,352	77,674	2,310	545,380	573	1.05	149	60	107	316	175	55,195	9.88

Merton	8,580	17,038	130	2,626	28,374	34	1.20	19	14	11	44	127	5,575	8.69
Mountrail		12,975		21	12,996	18	1.39	19	5	4	28	195	5,470	2.38
Oliver		7,490	87	70	7,647	7	.92							
Stark	60	17,168	73,052	652	90,932	100	1.10	57	14	4	18	95	1,711	4.47
Ward	331,930	121,470	178	97	453,675	516	1.14	152	29	6	63	239	15,046	6.04
Williams	770	47,794		35	48,599	65	1.34	49	6	62	243	208	50,648	[1] 8.96
Total: 1938	1,466,374	416,904	160,075	7,746	2,050,099	2,380	1.16	667	344	359	1,370	174	237,754	8.62
1937	1,877,216	470,778	193,933	9,810	2,250,837	2,639	1.17	689	407	379	1,475	181	267,522	8.41

SOUTH DAKOTA

Corson, Dewey, and Harding	27,148	15,826	190		43,164	57	1.32	5	20	7	32	199	6,353	[1] 6.79
Meade		1,076	100		1,176	2	1.70	6		2	8	93	740	1.59
Perkins		3,668	50		3,718	6	1.61	7	3		10	141	1,414	2.63
Total: 1938	27,148	20,570	340		48,058	65	1.35	18	23	9	50	170	8,507	5.65
1937	26,444	20,426	104	5	46,979	63	1.34	18	22	7	47	165	7,769	6.05

TEXAS

Bastrop and Milam	104,718	3,800	1,000	761	110,279	81	.73	88	22	12	[2] 122	150	18,266	6.04
Henderson, Titus, and Wood	708,378	17,502	5,245	4,815	735,940	598	.81	358		26	[2] 384	241	92,502	7.96
Total: 1938	813,096	21,302	6,245	5,576	846,219	679	.80	446	22	38	506	219	110,768	7.64
1937	830,042	28,763	1,553	5,934	866,292	683	.79	469	27	31	527	218	114,652	7.56

[1] Based upon the "reported" number of man-shifts where the operator keeps a record thereof; otherwise upon the "calculated" number of man-shifts obtained by multiplying the average number of men underground and on the surface at each mine by the number of days worked by the mine and tipple, respectively. Using the "calculated" man-shifts throughout as developed before 1932, the average output per man per day in 1938 was 3.55 in Montana, 9.57 in North Dakota, 5.17 in South Dakota, and 7.67 in Texas.

[2] Output obtained chiefly from strip pits in which the production per man per day is large.

NUMBER AND SIZE OF LIGNITE MINES

There were 212 active lignite mines in 1938, as reported to the Bureau of Mines (exclusive of many small mines in Montana and North Dakota producing less than 1,000 tons annually). Of these, 24 were in Montana, 165 in North Dakota, 15 in South Dakota, and 8 in Texas. In the field as a whole the classification by size of output is as follows:

TABLE 28.—*Number and production of lignite mines in 1938, classified by size of output*

Net tons	Mines		Production		
	Number	Percent of total	Total (net tons)	Average per mine (net tons)	Percent of total
Over 200,000	4	1.9	1,511,698	377,925	50.4
100,000 to 200,000	3	1.4	511,222	170,407	17.1
50,000 to 100,000	3	1.4	210,723	70,241	7.0
10,000 to 50,000	19	9.0	391,957	20,629	13.1
Under 10,000	183	86.3	372,321	2,035	12.4
	212	100.0	2,997,921	14,141	100.0

LENGTH OF WORKING DAY IN LIGNITE MINES

The following table summarizes the replies of mine operators to the question, "Number of hours operated per shift."

Reports from mines in the lignite field in 1938, including those reporting a day of irregular length, indicate that 77 percent of the men employed were in 8-hour mines and that the weighted average working shift was 8 hours.

The established working day does not necessarily measure the length of time actually worked or the time underground, because a miner may work overtime, the mine may shut down before the full day is over, the miner may go home before work at the mine stops, and he may spend considerable time in going to and from his place of work underground. As interpreted in the wage agreements, the day means the hours of labor at the usual working place, exclusive of any time for lunch and exclusive of the time spent in going from the entrance of the mine to and from his working place (see Coal chapter in Mineral Resources, Bureau of Mines, 1930, p. 656).

TABLE 29.—*Number of lignite mines in the United States having established working shift of certain length and number of men employed therein, in 1938, by States*

State	7 hours		8 hours		9 hours		Not reporting and all others [1]		Total	
	Mines	Men	Mines	Men	Mines	Men	Mines	Men	Mines	Men
Montana			12	89	1	3	11	31	24	[illegible]
North Dakota	10	104	121	983	3	88	31	195	165	1,37[illegible]
South Dakota			5	11	1	3	9	36	15	[illegible]
Texas			8	506					8	[illegible]
	10	104	146	1,589	5	94	51	262	212	2,0[illegible]

[1] Includes mines in which the day was more than 9 or less than 7 hours, was irregular, or was changed during the year; also mines where the operator has included time when the men were entering or leaving the mine, where the operator has reported the time of men in occupations in which the workday is longer than for other employees (as in stripping overburden), or where the work is staggered and two crews of men overlap.

LIGNITE LOADED FOR SHIPMENT BY INDIVIDUAL RAILROADS

TABLE 30.—*Lignite loaded for shipment by individual railroads in 1938, as reported by operators, in net tons*

Railroad	State	Quantity
Chicago, Milwaukee, St. Paul & Pacific	North Dakota	46,994
	South Dakota	
Great Northern	Montana	342,332
International-Great Northern	North Dakota	
Missouri-Kansas-Texas	Texas	
Rockdale, Sandow & Southern	do	
St. Louis Southwestern of Texas	do	813,096
Texas Short Line	do	
Minneapolis, St. Paul & Sault Ste. Marie	do	
Northern Pacific	North Dakota	524,438
	do	582,697
		2,309,557

METHODS OF RECOVERY

TABLE 31.—*Lignite mined by different methods in 1938, by States*

State	From underground workings (net tons)					From strip pits		Grand total production
	Mined by hand	Shot off the solid	Cut by machines	Not specified	Total underground	Net tons	Percent of grand total	
Montana	[1] 78,281	[1] 756,588		5,954	[1] 840,823	[1] 58,941	[1] 6.6	53,545
North Dakota	53,708	175,461	[2] 535,696	22,426	787,291	1,262,808	61.6	2,050,099	
South Dakota	1,420			2,589	4,009	44,049	91.7	48,058
Texas	(1)	(1)			(1)	(1)	(1)	846,219
	133,409	932,049	[2] 535,696	30,969	1,632,123	1,365,798	45.6	2,997,921

[1] Texas included with Montana. [2] 22 machines were used—15 "permissible" and 7 of other types.

STRIPPING OPERATIONS

TABLE 32.—*Statistical summary of stripping operations that produced lignite in 1938, by States*

State	Strip pits [1]	Shovels, dragline excavators, and coal-loading machines [2]	Production (net tons)	Value		Number of employees			Average number of days mines operated	Man-days of labor [3]	Average tons per man per day [3]
				Total (thousands of dollars)	Average per ton	In strip pits	All others	Total			
Montana and Texas	4	2	58,941	35	$0.59	29	1	30	115	3,454	17.06
North Dakota	58	31	1,262,808	1,452	1.15	344	142	486	180	87,288	14.47
South Dakota	5	2	44,049	59	1.34	23	7	30	224	6,718	6.56
	67	35	1,365,798	1,546	1.13	396	150	546	178	97,460	14.01

[1] Includes some pits in which the stripping is done by hand.
[2] In some operations the same equipment was used for stripping or excavating and for loading the coal; this duplication has been eliminated. In others the coal was excavated by machine and loaded by hand.
[3] Based upon the "reported" number of man-shifts where the operator keeps an accurate record thereof, otherwise upon the "calculated" number of man-shifts obtained by multiplying the number of men employed at the tipple, in loading coal, etc., and in stripping overburden by the number of days worked in each department, insofar as separately reported by the operator.

WORLD PRODUCTION OF LIGNITE

TABLE 33.—*World production of lignite (including brown coal), 1934–39, in metric tons*

[Compiled by R. B. Miller]

Country	1934	1935	1936	1937	1938	1939
North America:						
Canada	2,915,569	3,241,118	3,507,895	3,352,316	3,153,377	3,093,516
United States	[2] 2,337,000	2,494,907	2,821,048	2,919,685	2,719,654	2,696,000
Europe:						
Albania	1,824	2,000	3,130	3,560	3,866	[3]
Bulgaria	1,567,956	1,565,971	1,576,098	1,732,119	1,855,198	[3]
Czechoslovakia	15,070,706	15,113,576	15,948,767	17,895,411	14,716,693	[3]
Faroe Islands					8,000	[3]
France	1,025,490	906,730	943,230	1,015,000	1,057,250	[3]
Germany	136,003,366	146,032,747	160,276,036	183,538,054	195,312,067	[3]
Austria	2,850,931	2,970,683	2,897,203	3,241,770	3,341,730	[3]
Greece	104,193	83,325	105,621	131,083	108,010	[3]
Hungary	6,199,085	6,717,677	7,105,004	8,055,123	8,320,000	[3]
Italy	408,616	545,482	768,563	1,059,231	872,950	1,410,000
Netherlands	92,493	86,204	98,779	143,057	170,637	197,000
Poland	26,403	18,288	13,518	18,915	9,526	[3]
Portugal	15,391	19,738	20,677	23,098	14,854	35,125
Rumania	1,623,858	1,666,761	1,671,825	1,880,477	2,096,698	[3]
Spain	298,643	303,827	[4]	[4]	68,099	204,297
U. S. S. R.	11,383,000	13,820,000	[4]	[4]	[4]	[3]
Yugoslavia	3,926,333	4,002,193	4,034,577	4,574,232	5,286,781	5,604,312
Asia:						
India, British	385,914	430,316	419,110	488,408	545,283	[3]
Indochina					4,200	27,000
Japan	124,786	108,526	109,494	[3]	[3]	[3]
Levant	540		493	4,658	700	1,000
Turkey	52,777	73,355	95,234	116,397	129,315	151,257
Oceania:						
Australia (Victoria)	2,659,545	2,257,170	3,093,768	3,448,391	3,734,441	3,709,632
New Zealand	1,248,333	1,310,660	1,301,895	1,328,805	1,264,208	[3]
	190,323,000	203,771,000	224,853,000	254,442,000	264,170,000	[3]

[1] Lignite is also mined in Italian East Africa, but complete production figures are not available. Figures for 1939 are preliminary and subject to revision.
[2] Approximate production.
[3] Data not available.
[4] Estimate included in total.

TABLE 34.—*Production, value, men employed, days mines operated, and output per man per day at the principal hard-coal mines outside of Pennsylvania in 1938*

[Includes coal classified as anthracite and semianthracite in Geol. Survey Prof. Paper 100-A, The Coal Fields of the United States]

	Arkansas	Virginia	Colorado and New Mexico	Total
Production (net tons):				
Loaded at mines for shipment	192,145	109,642	29,475	331,262
Commercial sales by truck or wagon	2,634	23,384	969	27,087
Other sales to local trade, or used by employees, or taken by locomotives at tipple	73	1,441	3,013	4,527
Used at mines for power and heat	1,333	5,265	1,271	7,869
Total production	196,185	139,732	34,748	370,665
Value:				
Total	$531,000	$373,000	$145,000	$1,049,000
Average per ton	$2.71	$2.71	$4.17	$2.83
Number of employees:				
Underground	586	400	92	1,078
Surface	147	127	46	320
Total employees	733	527	138	1,398
Average number of days mines operated	96	135	115	115
Average tons per man per day	2.78	1.97	2.20	2.19

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PENNSYLVANIA ANTHRACITE

BY M. VAN SICLEN, L. MANN
AND J. R. BRADLEY

Chapter from
MINERALS YEARBOOK 1940
REVIEW OF 1939

UNITED STATES
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PENNSYLVANIA ANTHRACITE

By M. van Siclen, L. Mann, and J. R. Bradley

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The anthracite industry is of great economic importance in the 500 square miles comprising the Pennsylvania anthracite region. Regardless of the fact that production in the anthracite industry has suffered drastic reductions in recent years, in 1938—when production was the lowest since about the turn of the century—freight-commodity statistics of the Interstate Commerce Commission showed that anthracite ranked second in tonnage originated by class I railways and fourth in revenue produced. In 1939 the value of anthracite production at the mines was $187,175,000, and the gross revenue accruing to the railroads was $102,180,268.

Prices at the mines in 1939 were lower than in 1938; wholesale prices continued to decline, and retail prices in the leading markets remained at about 1938 levels. The index of employment also decreased, although average weekly earnings advanced. Freight rates on intrastate shipments were increased. The Anthracite Institute and Anthracite Industries, Inc., continued their cooperative and trade-promotion activities, and State legislation intended to promote stabilization of the industry was defeated by a narrow margin.

Increasing competition of other fuels, unfavorable weather in several recent years, the production of illicit or "bootleg" anthracite, and competition within the industry have combined to undermine the price structure. Early in 1940 virtually the entire industry agreed to a voluntary scheme of allocation of production that apparently has brought some relief. The fairly low temperatures in the early months of 1940, together with improved business conditions and higher

coastwise freight rates on bituminous coal from Hampton Roads to New York and New England, promise further increase in consumption of anthracite in 1940.

More favorable weather conditions, an increase in exports, and improved business conditions resulted in an increase in the output of anthracite in 1939. Production was 51,487,000 tons, a gain of 12 percent over 1938. Commercial shipments (excluding illicit or "bootleg" coal) were 41,063,869 tons in 1938 and 45,992,282 in 1939.

Shipments of anthracite from breakers and washeries in the first quarter of 1939 were less than in the corresponding period of 1938. In the second quarter, however, shipments advanced 13 percent over the second quarter of 1938; in the third quarter they were 32 percent

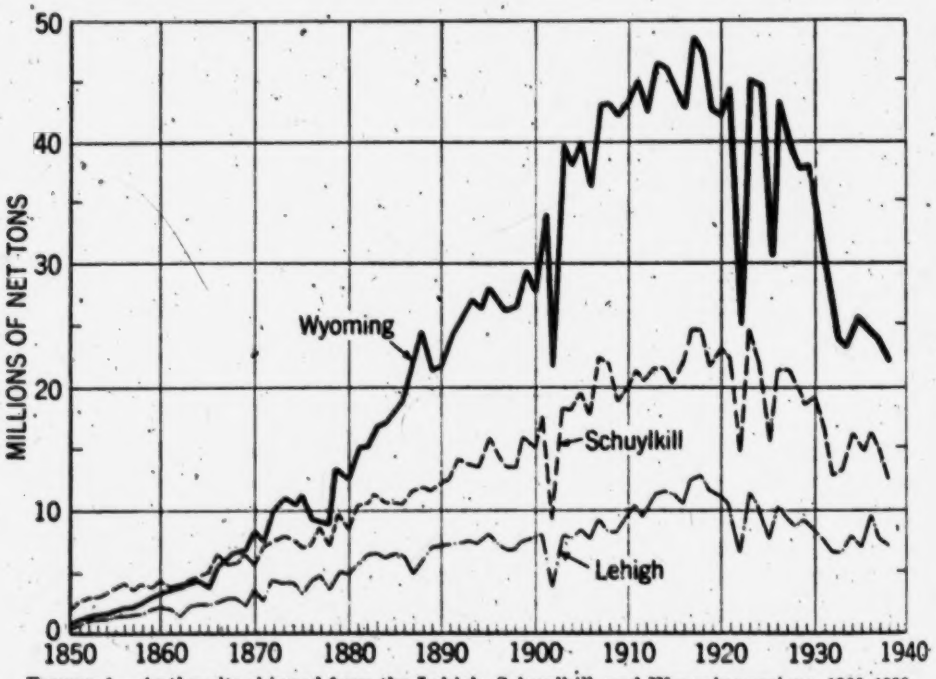

FIGURE 1.—Anthracite shipped from the Lehigh, Schuylkill, and Wyoming regions, 1850–1938.

higher; and in the last quarter shipments were 5 percent above 1938.

Receipts of anthracite at the upper Lake docks increased 8 percent in 1939 over 1938, and stocks declined 2 percent during the year.

Completion of the Huber central breaker of the Glen Alden Coal Co. denotes optimism for the future of the industry. The Huber breaker is one of the first to use Menzies cone separators to treat sized feed. The plant is expected to prepare 7,000 tons of anthracite daily.

The production of anthracite increased steadily from the early years of the nineteenth century to 1924, the last normal year under old competitive conditions. The peak was reached in 1917 at 99,611,811 tons. Since 1924 competitive fuels have increased in importance. Figure 1 shows shipments of Pennsylvania anthracite by regions since 1850.

The second annual anthracite conference of Lehigh University was held at Bethlehem, Pa., April 28–29, 1939, and the third annual conference was held May 9–10, 1940. The papers presented covered a wide field and contained much new and valuable information for

both the producer and consumer of anthracite. Research, new uses of anthracite, modern mechanical burning equipment, and problems of the industry arising from the general trend toward smaller sizes were discussed. Papers also were presented on combustion, economics, marketing, mining, and preparation of anthracite. The conferences were attended by persons interested in all phases of the anthracite industry. The following papers presented at the conferences are of economic interest:

CONFERENCE OF 1939

Paper 10. Use of Anthracite Ash in Building Materials and in Agriculture, by Dr. Raymond C. Johnson, Anthracite Industries fellowship, Mellon Institute of Industrial Research, Pittsburgh, Pa.

Paper 13. Some Economic Aspects of Anthracite, by Dr. Neil Carothers, dean of the College of Business Administration, Lehigh University.

CONFERENCE OF 1940

Paper 2. The Present Status of Anthrafilt Illustrated by Case Histories, by Homer G. Turner, filtration consultant, Anthracite Institute.

Paper 4. Mineral Wool from Anthracite Colliery Refuse and Anthracite Ashes, by H. J. Rose and R. C. Johnson, Anthracite Industries fellowship, Mellon Institute of Industrial Research, Pittsburgh, Pa.

Paper 8. Effect Upon the Economy of the Anthracite Industry of Grinding Large Sizes to Pea and Smaller, by Cadwallader Evans, Jr., vice president and general manager, and Harold G. Boyd, engineering statistician, Hudson Coal Co.

TABLE 1.—*Statistical trends of the Pennsylvania anthracite industry, 1935–39*

	1935	1936	1937	1938	1939
Production:					
Loaded at mines for shipment:					
Breakers net tons	44,369,285	46,256,132	44,016,915	39,010,935	[1] 43,669,8[illegible]
Washeries do	1,794,402	2,066,973	1,337,879	1,679,509	1,766,3[illegible]
Dredges do	374,142	324,895	348,350	373,425	565,2[illegible]
Sold to local trade and used by employees net tons	2,874,970	3,226,887	2,981,391	2,722,206	3,081,[illegible]
Used at collieries for power and heat net tons	2,745,984	2,704,648	2,671,898	2,312,952	2,414,0[illegible]
Total production do	52,158,783	54,579,535	51,856,433	46,099,027	51,487,3[illegible]
Value at breaker, washery, or dredge	$210,131,000	$227,004,000	$197,599,000	$180,600,000	$187,175,0[illegible]
Average sales realization per net ton on breaker shipments:					
Lump and broken	$5.16	$5.05	$5.08	$5.24	$4.6[illegible]
Egg	$5.44	$5.60	$5.06	$5.18	$4.7[illegible]
Stove	$5.87	$6.09	$5.21	$5.33	$4.8[illegible]
Chestnut	$5.64	$5.91	$5.23	$5.36	$4.8[illegible]
Pea	$4.16	$4.30	$4.01	$3.88	$3.6[illegible]
Total domestic	$5.45	$5.67	$5.01	$5.10	$4.6[illegible]
Buckwheat No. 1	$2.88	$2.91	$2.95	$3.03	$2.9[illegible]
Buckwheat No. 2 (Rice)	$1.74	$2.01	$2.26	$2.35	$2.2[illegible]
Buckwheat No. 3 (Barley)	$1.08	$1.23	$1.45	$1.61	$1.6[illegible]
Boiler			$.78		
Other, including Buckwheat No. 4	$.57	$.68	$.79	$.87	$.9[illegible]
Total steam	$2.03	$2.10	$2.21	$2.33	$2.2[illegible]
Total, all sizes	$4.29	$4.42	$4.03	$4.16	$3.8[illegible]
Percentage by sizes in total breaker shipments:					
Lump and broken percent	0.3	0.3	0.4	0.3	0.[illegible]
Egg do	7.0	6.5	5.7	5.4	5.[illegible]
Stove do	21.8	21.3	22.1	23.7	24.[illegible]
Chestnut do	26.1	26.4	26.2	26.0	25.[illegible]
Pea do	10.7	10.4	10.8	10.6	11.[illegible]
Total domestic do	65.9	64.9	65.2	66.0	66.[illegible]
Buckwheat No. 1 do	15.1	15.1	14.7	14.8	14.[illegible]
Buckwheat No. 2 (Rice) do	9.3	8.4	7.9	7.7	7.[illegible]
Buckwheat No. 3 (Barley) do	7.8	8.8	8.9	8.6	8.[illegible]
Boiler do			[2]		
Other, including Buckwheat No. 4 percent	1.9	2.8	3.3	2.9	2.[illegible]
Total steam do	34.1	35.1	34.8	34.0	33.[illegible]
Producers' stocks on Dec. 31 [3] net tons	1,911,000	2,259,000	2,154,000	1,458,000	994,000
Exports do	1,609,000	1,678,000	1,914,000	1,909,000	2,590,000
Imports do	571,000	615,000	396,000	363,000	298,000
Consumption (calculated) do	51,100,000	53,200,000	50,400,000	45,200,000	49,700,000
Capacity in operation (calculated) do	84,000,000	87,000,000	83,000,000	82,000,000	[4]
Average number of days worked	189	192	189	171	[4]
Man-days lost on account of strikes and lock-outs	763,307	407,372	580,462	579,457	[4]
Number of men on strike during year	26,127	27,574	34,346	27,435	[4]
Average number of men employed	103,269	102,081	99,085	96,417	[5] 93,000
Output per man per day net tons	2.68	2.79	2.77	2.79	[4]
Output per man per year do	505	535	523	478	[4]
Quantity cut by machines do	1,848,095	2,162,744	1,894,512	1,588,407	1,881,584
Quantity mined by stripping do	5,187,072	6,203,267	9,696,018	5,095,341	5,486,479
Quantity loaded by machines underground net tons	9,279,057	10,827,946	10,683,837	10,151,669	11,773,83[illegible]
Distribution:					
Total receipts in New England [6] net tons	5,402,000	5,287,000	4,761,000	4,468,000	4,907,000
Exports to Canada do	1,592,000	1,664,000	1,893,000	1,896,000	2,577,000
Loaded into vessels at Lake Erie [7] net tons	559,000	689,000	674,000	450,000	531,000
Receipts at Duluth-Superior [8] do	182,000	309,100	296,000	155,000	202,000

[1] Includes a small quantity of washery coal. [2] Less than 0.1 percent.
[3] Anthracite Institute. Figures represent prepared coal on the ground at the breaker.
[4] Data not yet available.
[5] Estimated from the report of the Pennsylvania Department of Mines; Bureau of Mines data not yet available.
[6] Commonwealth of Massachusetts, Division on the Necessaries of Life. [7] Ore and Coal Exchange.
[8] U. S. Engineer Office, Duluth, Minn.

TABLE 2.—*Statistical summary of monthly developments in the Pennsylvania anthracite industry in 1939*

[All tonnage figures represent net tons]

	1939													Change from 1938 (percent)	1938 (total)
	January	February	March	April	May	June	July	August	September	October	November	December	Total		
Production, including mine fuel, local sales, and dredge coal:															
Monthly total	5,019,000	4,169,000	3,652,000	5,367,000	5,141,000	3,577,000	2,951,000	3,883,000	4,840,000	4,985,000	3,989,000	3,914,000	51,487,000	+11.7	46,099,000
Average per working day	200,800	177,400	135,300	223,600	197,700	137,600	118,000	143,800	193,600	199,400	166,200	156,600	170,200	+12.0	151,900
Shipments, breakers and washeries only:[1] Monthly total, all sizes	4,046,821	3,381,642	3,231,929	4,841,771	4,205,564	2,959,303	2,611,299	3,146,744	4,286,905	4,333,195	3,329,218	3,434,898	43,809,199	+10.5	39,648,026
Distribution:															
Lake Erie loadings[2]				8,745	100,783	96,534	77,538	95,190	42,949	60,281	49,077	238	531,335	+18.0	450,324
Receipts at Duluth-Superior[3]					27,506	44,066	34,391	35,554	18,258	32,372	9,579		201,726	+29.8	155,462
Upper Lake dock trade:[4]															
Receipts:															
Lake Superior					20,147	62,522	34,402	35,565	18,368	35,654	9,782		216,440	+21.7	177,788
Lake Michigan	447	400	1,414	11,478	40,863	41,051	36,213	54,055	17,377	30,042	37,764	328	271,432	−1.4	275,358
Deliveries (reloadings):															
Lake Superior	19,403	17,062	5,640	18,680	15,367	22,527	11,041	13,312	26,343	28,641	18,146	17,892	213,554	+1.2	210,945
Lake Michigan	22,195	22,306	16,605	17,674	21,455	32,581	30,778	28,276	33,829	27,324	18,245	17,176	288,444	−1.5	292,723
Retail yards—183 selected dealers: Deliveries[4]	367,284	329,162	316,797	275,109	221,047	200,275	251,936	264,116	324,352	298,621	257,652	333,401	3,439,752	(5)	[5]3,638,835
New England receipts:[6]															
By tide (including imports)	51,325	68,442	44,744	89,957	113,915	96,812	84,706	77,550	73,974	61,873	56,734	45,319	865,351	−11.4	977,170
By rail	387,299	343,515	290,356	376,304	437,532	252,589	273,117	257,465	365,884	439,817	323,845	294,203	4,041,926	+15.8	3,490,700
Exports[7]	185,239	173,032	160,662	153,792	376,176	216,768	179,692	145,741	447,956	292,408	141,642	116,892	2,590,000	+35.7	1,908,911
Imports[7]	27,717	34,312	18,768	12,769	43,869	24,151	28,732	35,536	43,577	8,230	13,093	7,399	298,153	−17.8	362,895
Industrial consumption by:															
Railroads (class I only)[8]	138,818	138,516	145,855	195,060	236,468	101,070	110,143	100,967	106,950	127,937	136,320	143,561	1,681,665	+19.6	1,406,245
Electric power utilities[9]	187,886	158,256	163,931	176,076	203,247	178,573	172,467	184,651	189,582	213,611	203,133	212,615	2,244,028	+14.4	1,962,352
Other industrial consumers[10]	118,476	124,902	128,964	91,934	80,310	87,796	60,893	85,893	87,755	98,574	115,554	91,214	1,172,265	+.8	1,162,866

See footnotes at end of table.

TABLE 2.—*Statistical summary of monthly developments in the Pennsylvania anthracite industry in 1939*—Continued

[All tonnage figures represent net tons]

	1939—Continued													Change from 1938 (percent)	1938 (total)
	January	February	March	April	May	June	July	August	September	October	November	December	Total		
Stocks at end of period shown:															
Railroads (class I only)[8]	126,307	99,896	80,604	147,123	111,007	81,655	96,482	116,797	129,162	142,315	129,000	110,329	110,329	−3.3	114,078
Electric power utilities [9]	1,158,188	1,155,559	1,138,115	1,144,083	1,199,910	1,242,902	1,230,017	1,206,468	1,185,397	1,239,136	1,169,209	1,113,839	1,113,839	−8.0	1,210,768
Other industrial consumers [10]	234,974	260,403	212,551	225,169	255,256	246,390	172,644	218,600	237,639	246,010	232,037	165,842	165,842	−22.1	212,790
Stocks on upper Lake docks: [4]															
Lake Superior	129,936	112,868	107,223	87,856	92,630	132,610	155,967	178,211	170,235	177,243	168,872	151,475	151,475	+1.4	149,343
Lake Michigan	130,189	108,151	92,959	86,742	107,514	117,965	128,729	154,644	138,191	140,909	160,456	143,609	143,609	−5.4	151,813
Retail stocks—183 selected dealers [4]	*357,083	304,547	225,643	324,817	459,634	516,552	529,988	531,873	547,992	589,898	540,226	445,354	445,354	+5.8	421,092
Producers' stocks [1]	1,046,429	761,174	407,814	85,867	238,194	558,638	715,572	1,129,005	1,172,298	1,218,871	1,364,516	993,848	993,848	−31.8	1,457,533
Wholesale prices: [11]															
On tracks, destination:															
Chestnut	$9.73	$9.70	$9.64	$9.08	$9.15	$9.15	$8.67	$8.60	$8.65	$9.03	$9.16	$9.16	$9.14	−9.2	$9.44
Pea	$8.30	$8.25	$8.19	$7.67	$7.75	$7.81	$7.70	$7.67	$7.70	$7.93	$7.95	$7.97	$7.91	−2.2	$8.09
Index numbers (1926=100)	80.3	79.9	79.4	74.7	75.3	75.5	72.6	72.1	72.5	75.3	76.1	76.1	75.8	−2.8	78.0
Labor conditions: [11]															
Average weekly earnings	$24.74	$28.20	$21.55	$27.08	$35.84	$23.30	$18.65	$23.13	$26.64	$33.63	$26.90	$17.16	$25.52	+9.1	$23.40
Index of employment (1929 average=100)	50.0	52.2	51.7	53.0	52.6	51.2	44.7	48.5	49.4	51.9	51.3	51.0	50.6	−3.3	52.3
Index of pay rolls (1929 average=100)	38.0	45.2	34.2	43.4	57.0	36.1	25.2	33.8	40.1	52.2	42.0	26.6	39.5	+3.4	38.2

[1] Anthracite Institute.
[2] Ore and Coal Exchange, Cleveland, Ohio.
[3] U. S. Engineer Office, Duluth, Minn.
[4] Bituminous Coal Division, U. S. Department of the Interior.
[5] Data for 1938 not comparable with 1939.
[6] Commonwealth of Massachusetts, Division on the Necessaries of Life.
[7] Bureau of Foreign and Domestic Commerce.
[8] Association of American Railroads.
[9] Federal Power Commission.
[10] National Association of Purchasing Agents.
[11] Bureau of Labor Statistics.

Anthracite Institute.—The usual functions of the Anthracite Institute were carried on during the year, and especial attention was given to proposed Pennsylvania legislation to regulate the industry and to the Canadian market.

Anthracite Industries, Inc.—Laboratory tests of new anthracite-burning equipment were continued by Anthracite Industries, Inc.; approval was given to equipment meeting its requirements; and efforts were redoubled to promote the use of such equipment. Schools in anthracite merchandising were conducted, as well as a series of stoker schools, and a summer selling plan was presented to anthracite dealers. Exhibits of equipment were maintained at Boston, Philadelphia, and New York. Manufacturers cooperated with Anthracite Industries, Inc., in its exhibit at the New York World's Fair where stokers, furnaces, boilers, cooking stoves, thermostats, and other equipment were on display. It is reported that 1,152,330 persons visited the exhibit in 1939, thousands of whom saw anthracite as a thoroughly modern fuel for the first time.

There is little doubt that increased efficiency and the rapid strides made in the modernization of anthracite-burning equipment such as stokers, hand-fired boilers, and water heaters have created a favorable impression on the consuming public.

Nonfuel uses of anthracite and anthracite refuse.—The nonfuel use of anthracite, especially anthrafilt used in the purification of water, continued to expand. During the year attention was also given to the use of anthracite ashes as a soil conditioner and, after processing, as an insulating material.

Technologic developments.—There were no important technologic developments during 1939. The Pennsylvania General Assembly appropriated funds, which were matched by the anthracite industry, for a program of research, and the Secretary of Mines appointed a committee to consider a program to be conducted by the School of Mineral Industries of the Pennsylvania State College. Two specific problems will be studied: The gasification of anthracite and the production of carbon products from anthracite. Certain technologic developments, present or prospective, were discussed at the Third Annual Conference of Lehigh University in May 1940.

Weather.—According to the Monthly Weather Review, the year 1939 was slightly cooler than 1938 but was still warmer than normal in most regions. Departures from normal temperatures in some of the chief anthracite-consuming States were: New England States—January −0.8, February +2.7, March −4.5, April −3.4, October normal, November −3.1 and December +0.5; New York—January +0.2, February +4.1, March −2.2, April −2.5, November −3.0, and December +1.4; Pennsylvania—January +1.8, February +5.3, March +0.9, April −1.9, October +1.0, November −1.6, and December +2.6; New York City (one of the leading anthracite markets)—January +1.4, February +6.1, March +1.1, April −1.6. October +0.1, November −1.0; and December +1.2.

Distribution.—According to the Pennsylvania Department of Mines, rail, tide, and truck shipments of Pennsylvania anthracite to destinations in the United States totaled 44,869,453 tons in 1939 compared with 35,292,731 tons in 1938. In 1939 truck shipments were 4,824,537 tons, or 11 percent of total shipments, as against 9 percent in 1938. Virtually all truck shipments go to the Middle Atlantic States. Rail

and tide shipments in 1939 totaled 40,044,916 tons, 63 percent domestic sizes and 37 percent steam sizes. Of the total steam sizes shipped by rail and tide, 95 percent went to the Middle Atlantic States.

Details covering distribution of shipments of Pennsylvania anthracite by rail and tide (truck shipments excluded) for 1937–39 are shown in table 3.

TABLE 3.—*Shipments of Pennsylvania anthracite, 1937–39, by States of destination, in net tons* [1]

[Truck shipments excluded]

	1937	1938	1939
New England States	4,128,408	3,551,572	4,489,977
New York	16,388,675	13,214,996	16,251,198
New Jersey	7,533,475	6,180,129	8,494,964
Pennsylvania	8,797,836	6,827,437	8,407,564
Delaware	213,493	168,316	194,739
Maryland	614,218	545,454	592,627
District of Columbia	290,524	248,577	256,936
Virginia	107,744	103,580	108,418
Ohio	168,565	91,017	112,833
Indiana	90,286	80,153	98,090
Illinois	358,054	254,193	277,166
Wisconsin	429,965	345,445	355,291
Minnesota	120,930	77,461	93,367
Michigan	300,316	214,768	245,519
Other States	91,314	65,873	66,217
Total United States	39,633,803	31,968,971	40,044,916
Canada	773,086	1,631,489	2,441,070
Other foreign countries		4,476	4,456
Grand total	41,406,889	33,604,936	42,490,442

[1] Department of Mines, Harrisburg, Pa.

Freight rates.—Increases in freight rates ranging from 3 to 12 cents a gross ton were granted the railroads by the Interstate Commerce Commission on intrastate movement of coal. The so-called motor-compelled railway freight rates initiated in 1935 were extended to June 20, 1940. The trucking of anthracite to market, which became important about 1930, has expanded until it is now estimated at 4,000,000 tons annually, not including several million tons trucked from illicit or "bootleg" operations.

Competitive fuels in the United States and in the principal markets.—Sales of liquefied petroleum gases for domestic purposes throughout the United States totaled 2,084,047 barrels in 1939 compared with 1,376,952 in 1938. Sales for domestic use in 1939 represented 39 percent of total deliveries for all purposes compared with 35 percent in 1938. At the end of 1939, according to the American Gas Association, liquefied petroleum gas was being delivered through mains to consumers in 178 communities in 30 States by 82 companies supplying 49,800 customers.

According to the American Gas Association, sales of natural gas in the United States in 1938 and 1939, respectively, were as follows:

Sales for domestic use, including house heating, 349,285,000,000 and 367,731,500,000 cubic feet, an increase of 5 percent; commercial sales, 99,845,000,000 and 107,769,900,000 cubic feet, an increase of 8 percent; and industrial sales, 565,674,000,000 and 626,096,400,000 cubic feet, an increase of 11 percent.

Shipments of oil burners (for all uses other than ranges, stoves, water heaters, and space heaters) within the United States gained 56 percent over 1938 and to Canada 84 percent. Factory sales of anthracite stokers for domestic purposes were 7 percent less than in 1938.

Sales of heating and range oils in the United States increased about 13 percent in 1939 over 1938. An unusual feature of the sales of heating and range oils in 1938, as revealed in a study by the Petroleum Economics Division of the Bureau, is the fact that in New England 46 percent of the total sales represented range oil.

Principal markets.—In 1939 shipments of Pennsylvania anthracite to the principal markets (New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia) were only 5 percent less than in 1936, whereas in 1938 they were 26 percent lower. New England, New Jersey, and Delaware received larger tonnages than in 1936, but receipts in the other States declined. Although these principal markets continue to take by far the greater part of the anthracite produced, their percentage of the total production declined steadily until 1939, when it was slightly greater than in 1936. In 1936, 1937, 1938, and 1939, the respective percentages were 84.2, 80.2, 73.9, and 84.5. Imports of anthracite, virtually all into New England, have declined each year since 1936.

Of the total fuels represented in this study (which do not include bituminous coal, petroleum coke, or wood because of lack of statistics showing the necessary break-down), Pennsylvania anthracite comprised 64 percent in 1936, 60 percent in 1937, and 55 percent in 1938. In the same years coke for domestic use was 7, 6, and 6 percent, and heating and range oil 28, 33, and 38 percent, respectively. Imports of anthracite, briquets, and coke were only about 1 percent in each year. Imported fuel oils are included in the totals.

Of the principal anthracite markets, only New York and Pennsylvania consume much natural gas. In 1939 natural-gas sales in these States for domestic use and home heating (by utility companies making 93 percent of the sales in New York and 56 percent in Pennsylvania) totaled 42,161,945,000 cubic feet, the equivalent of about 1,730,000 tons of coal.

Shipments of briquets to these markets (including imports which declined to 1 ton in 1939) have decreased steadily since 1936, but in 1939 shipments of briquets of domestic origin were slightly higher than in 1938.

Deliveries of coke of domestic and foreign origin for domestic use also declined in 1937 and 1938 but improved in 1939.

Details showing the apparent consumption of anthracite and selected competitive fuels in the principal anthracite markets, 1936–39, are shown in table 4.

TABLE 4.—*Apparent consumption of anthracite and selected competitive fuels in the principal anthracite markets, 1936–39*

[Thousands of net tons]

Fuel	New England	New York	New Jersey	Delaware	Maryland	Pennsylvania	District of Columbia	Total	
								Quantity	Percent of total fuels
Anthracite:									
All users:[1]									
1936	4,479	[2] 18,217	[2] 8,482	250	713	13,478	348	45,967	64.1
1937	4,129	[2] 16,695	[2] 7,796	238	655	11,777	296	41,586	60.0
1938	3,553	[2] 13,452	[2] 6,421	198	574	9,603	254	34,055	55.0
1939	4,492	[2] 16,716	[2] 9,060	259	634	12,077	264	43,502	
Imports:[3]									
1936	612	1						613	.9
1937	395							395	.6
1938	363							363	.6
1939	298							298	
Briquets:									
Domestic use:									
1936	60	57	3	1	4	21	1	147	.2
1937	40	36	2		2	14	1	95	.1
1938	38	27	1		3	11		80	.1
1939	46	23	1		2	11	1	84	
Imports:[3]									
1936	20							20	(4)
1937	7							7	(4)
1938	14							14	(4)
1939	1							1	
Coke:									
Domestic use:									
1936	1,420	2,234	550	7	9	783	2	5,005	7.0
1937[5]	1,144	1,800	443	6	7	631	2	4,033	5.8
1938[5]	1,018	1,604	395	5	7	563	1	3,593	5.8
1939[5]	1,077	1,696	413	5	7	596	2	3,796	
Imports:[3]									
1936	83	120						203	.3
1937	43	77						120	.2
1938	21	7						28	.1
1939	12	19						31	
Oil: Heating and range:[6]									
1936	8,003	6,370	2,731	87	477	1,740	343	19,751	27.5
1937	9,358	7,457	3,179	110	578	1,985	390	23,057	33.3
1938	9,649	7,677	3,269	101	591	2,052	406	23,745	38.4
1939	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	
Total fuel:[8]									
1936	14,677	26,999	11,766	345	1,203	16,022	694	71,706	100.0
1937	15,116	26,065	11,420	354	1,242	14,407	689	69,293	100.0
1938	14,656	22,767	10,086	304	1,175	12,229	661	61,878	100.0
1939	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)

[1] Pennsylvania Department of Mines, illicit coal not included.
[2] An important but undetermined part of anthracite shown as shipped to New Jersey is reshipped to New York City.
[3] Bureau of Foreign and Domestic Commerce.
[4] Less than 0.05 percent.
[5] Estimated on the basis of distribution in 1936.
[6] Converted to coal equivalent on the basis of 4 barrels of fuel oil equaling 1 ton of coal.
[7] Date not yet available.
[8] Does not include bituminous coal.

Receipts of Pennsylvania anthracite in the New England States declined nearly 61 percent from 1917 to 1939; receipts by rail decreased 44 percent and by tide 80 percent. The drop in total receipts between 1917 and 1927 was 23 percent and between 1927 and 1937, 52 percent. Table 5 gives details of receipts of anthracite in New England.

TABLE 5.—*Receipts of anthracite in New England, 1917, 1920, 1923, and 1927–39, in thousands of net tons*

Year	Receipts by tide [1]						Receipts by rail [1]	Imports [2]	Total receipts of Pennsylvania anthracite [3]
	Maine	New Hampshire	Massachusetts	Rhode Island	Connecticut	Total			
1917	432	47	2,222	555	1,165	4,421	7,259	1	11,679
1920	307	6	2,015	450	743	3,521	7,804	1	11,324
1923	437	27	2,216	511	891	4,082	8,102	145	12,039
1927	242	33	1,220	311	615	2,421	6,725	106	9,040
1928	205	35	1,373	301	528	2,442	6,934	369	9,007
1929	237	17	1,227	329	450	2,260	6,781	483	8,558
1930	275	17	1,236	271	422	2,221	6,169	658	7,732
1931	164	18	1,125	282	348	1,937	5,125	611	6,451
1932	148	10	1,014	212	275	1,659	3,980	574	5,065
1933	195	7	1,027	202	259	1,690	3,562	443	4,809
1934	168	20	946	190	266	1,590	4,382	477	5,495
1935	121	7	802	205	237	1,372	4,030	559	4,843
1936	127	14	792	198	267	1,398	3,889	612	4,675
1937	81	11	604	152	200	1,048	3,713	395	4,366
1938	93	2	554	137	191	977	3,491	363	4,105
1939	(4)	(4)	(4)	(4)	(4)	865	4,042	298	4,609

[1] Commonwealth of Massachusetts, Division on the Necessaries of Life.
[2] Bureau of Foreign and Domestic Commerce.
[3] Total receipts by rail and by tide less imports. [4] Data not available.

According to a survey of the Commonwealth of Massachusetts, Division on the Necessaries of Life, the consumption of domestic sizes of anthracite in Massachusetts in the coal year 1938–39 (2,320,000 tons) decreased about 7 percent compared with 1937–38 and that of Buckwheat (176,000 tons) declined about 8 percent. Consumption of bituminous coal, coke, and briquets also declined, but that of fuel oil increased slightly.

Stocks.—Stocks of anthracite in the hands of railroads, electric-power utilities, and other industrial consumers at the end of 1939 were 10 percent (148,000 tons) less than at the end of December 1938. Producers' stocks declined 32 percent (464,000 tons) during the year.

Consumption.—Calculated consumption of anthracite—production, plus imports, minus exports, and plus or minus changes in producers' stocks at the beginning and end of the year—was 49,700,000 tons in 1939, a 10-percent increase over 1938. Illicit coal has not been considered in either year.

Consumption of anthracite by railroads in 1939 was 20 percent above 1938; consumption by electric power utilities rose 14 percent and other industrial consumption 1 percent over 1938.

Labor.—A new 2-year labor contract (expiring April 30, 1941) was concluded between the anthracite-mine operators and the United Mine Workers of America. The contract provides for recognition of the United Mine Workers of America as the exclusive bargaining agency and continues the 35-hour workweek, the prevailing rates of pay, and the general provisions of the previous agreement.

Favorable relations between the anthracite-producing companies and labor have resulted in closer cooperation on matters vitally affecting the industry.

TABLE 6.—*Total supplies of fuels commonly used for domestic purposes in the United States, 1924 and 1936–39*

[Wherever available the figures represent the quantity actually consumed for domestic heating or for heating offices, apartments, hotels, schools, hospitals, etc. Where such figures are not available but where the fuel is known to be used chiefly for domestic purposes, the total production (or imports) is shown to indicate the trend of growth]

	1924	1936	1937	1938	1939
SOLID FUELS (NET TONS)					
Anthracite:					
Production:					
Shipments of domestic sizes	56,576,296	30,472,986	29,092,974	26,206,508	29,504,632
Shipments of Buckwheat No. 1 [1]	9,510,508	7,507,767	6,859,707	6,159,006	6,569,902
Shipments of smaller steam sizes	11,160,695	10,667,247	10,250,463	8,698,355	9,917,748
Local sales	3,043,939	3,226,887	2,981,391	2,722,206	3,081,073
Total commercial production	80,291,438	51,874,887	49,184,535	43,786,075	49,073,355
Exports	4,017,785	1,678,024	1,914,173	1,908,911	2,500,000
Imports for consumption (chiefly from United Kingdom and U. S. S. R.)	117,951	614,639	395,737	362,895	298,153
Fuel briquets [2]	580,508	[3] 1,145,323	977,254	868,382	880,981
Packaged-fuel production		66,427	146,037	160,952	215,507
Coke:					
Byproduct sales for domestic use	2,812,771	9,643,507	7,807,792	7,129,384	7,549,937
Beehive sales for domestic use	139,886	377,836	299,726	93,306	88,204
Imports for consumption	82,833	329,959	286,364	135,240	141,911
Gas-house-coke sales [4]	1,400,000	403,600	350,700	342,300	362,000
Petroleum-coke production	761,100	1,378,200	1,306,600	1,602,200	[5] 1,666,400
Anthracite and semianthracite production outside of Pennsylvania	704,513	520,452	468,852	370,665	[6]
Lignite production [7]	2,255,385	3,109,689	3,218,419	2,997,921	[5] 2,972,000
Bituminous-coal sales for domestic use	[6]	[6]	[6]	[6]	[6]
OIL (BARRELS OF 42 GALLONS)					
Oil sales for heating buildings:					
Range oil [8]	[6]	27,292,000	[3] 32,259,000	33,707,000	[10] 36,500,000
Heating oils.[11]					
Domestic	5,021,000	99,257,000	[3] 116,617,000	118,323,000	[10] 135,125,000
Commercial	[6]				
Liquefied petroleum gases, domestic	[6]	714,600	972,000	1,377,000	2,084,000
GAS (MILLION CUBIC FEET)					
Natural-gas consumption for domestic and commercial use [12]	285,152	454,969	489,234	482,068	[5] 510,000
Manufactured-gas sales for: [13]					
Domestic use	[6]	197,240	194,350	197,052	194,014
House heating	[6]	41,146	45,525	47,918	56,048

[1] A considerable part of the Buckwheat No. 1 is used for domestic purposes.
[2] Production plus imports less exports. [3] Revised figures. [4] Partly estimated.
[5] Subject to revision. [6] Data not available. [7] An estimated two-thirds is used for domestic purposes.
[8] Exact data not available; estimated between 55,000,000 and 77,000,000 tons a year, including lignite and anthracite and semianthracite outside of Pennsylvania, which are shown separately.
[9] Range oil is a light distillate used for house heating, hot-water heating, and cooking.
[10] Estimated. [11] Includes all grades of fuel oil used for heating buildings.
[12] Includes gas used for heating offices, hotels, apartments, schools, hospitals, and stores and other large buildings, as well as houses.
[13] American Gas Association. Data revised as of March 1940.

Pennsylvania anthracite industry.—Trade practice and historical usage recognize two major divisions in the coal industry of the United States—bituminous coal and Pennsylvania anthracite. Anthracite and semianthracite also are mined in parts of Virginia, Arkansas, Colorado, and New Mexico. Locally these coals represent distinct and important industries, but the tonnages involved are small and for statistical convenience usually are grouped with the totals of the bituminous-coal industry. Tables in the chapter on Bituminous Coal in this volume record the 1938 production of anthracite and semianthracte outside of Pennsylvania; data for 1939 are not yet available.

The Pennsylvania anthracite industry, as here defined, includes all nonbituminous fields of that State. Trade usage commonly includes with Pennsylvania anthracite the output of the Bernice Basin in Sullivan County, although the coal of this basin is classified officially as semianthracite.

SOURCES AND ACKNOWLEDGMENTS

Annual statistics of the Pennsylvania anthracite-mining industry are prepared from a canvass by mail of all known anthracite operations, including over 400 active producers. About 95 percent of the tonnage is reported directly by producers, and the remaining 5 percent is estimated on collateral evidence. The data on individual operations furnished by the producers are voluntary and confidential, as is customary in the statistical services of the Bureau of Mines.

The standard form of report, as developed by the Bureau and its predecessor in mineral statistics, the Geological Survey, provides for data on production, shipments, mine realization of products, mine stocks, plant and equipment, and employment.

In assembling available detailed information free use has been made of the pertinent figures prepared by the Anthracite Institute, the American Association of Railroads, and the Pennsylvania Department of Mines, to all of whom thanks are extended for their cordial and continued cooperation. Thanks are due especially to the producers for reporting so promptly and, in general, so fully upon their operations in 1939, when the year as a whole was so critical for the industry.

PRODUCTION

By weeks and months.—The following tables summarize the statistics of weekly and monthly production of anthracite. Statistics of current output are estimated from tonnage reports from trade sources and from records of car loadings. The weekly and monthly figures in tables 7 and 8 have been adjusted to the annual total ascertained by direct canvass of the operators.

TABLE 7.—*Estimated weekly production of Pennsylvania anthracite in 1939, in net tons.*

Week ended—	Weekly production	Number of working days	Daily average	Week ended—	Weekly production	Number of working days	Daily average
Jan. 7	943,000	5	188,600	July 15	773,000	6	128,800
Jan. 14	1,042,000	6	173,700	July 22	768,000	6	128,000
Jan. 21	1,236,000	6	206,000	July 29	758,000	6	126,300
Jan. 28	1,329,000	6	221,500	Aug. 5	776,000	6	129,300
Feb. 4	1,224,000	6	204,000	Aug. 12	833,000	6	138,800
Feb. 11	1,121,000	6	186,800	Aug. 19	783,000	6	130,500
Feb. 18	865,000	6	144,200	Aug. 26	856,000	6	142,700
Feb. 25	986,000	5.5	179,300	Sept. 2	929,000	6	154,800
Mar. 4	927,000	6	154,500	Sept. 9	832,000	5	166,400
Mar. 11	779,000	6	129,800	Sept. 16	1,215,000	6	202,500
Mar. 18	802,000	6	133,700	Sept. 23	1,362,000	6	227,000
Mar. 25	800,000	6	133,300	Sept. 30	1,271,000	6	211,800
Apr. 1	814,000	5	162,800	Oct. 7	1,262,000	6	210,300
Apr. 8	997,000	6	166,200	Oct. 14	1,240,000	6	206,700
Apr. 15	1,228,000	6	204,700	Oct. 21	1,210,000	6	201,700
Apr. 22	1,539,000	6	256,500	Oct. 28	1,149,000	6	191,500
Apr. 29	1,575,000	6	262,500	Nov. 4	753,000	5	150,600
May 6	1,497,000	6	249,500	Nov. 11	930,000	5	186,000
May 13	1,483,000	6	247,200	Nov. 18	911,000	6	151,800
May 20	936,000	6	156,000	Nov. 25	806,000	5	161,200
May 27	836,000	6	139,300	Dec. 2	856,000	6	142,700
June 3	767,000	5	153,400	Dec. 9	374,000	6	62,300
June 10	839,000	6	139,800	Dec. 16	1,114,000	6	185,700
June 17	763,000	6	127,200	Dec. 23	1,249,000	6	208,200
June 24	746,000	6	124,300	Dec. 30	1,034,000	5	206,800
July 1	878,000	6	146,300				
July 8	491,000	5	98,200	Calendar year	51,487,000	302.5	170,200

TABLE 8.—*Estimated monthly production of Pennsylvania anthracite, 1936–39* [1]

[Production figures represent thousands of net tons]

Month	1936			1937			1938			1939		
	Monthly production	Number of working days	Daily average	Monthly production	Number of working days	Daily average	Monthly production	Number of working days	Daily average	Monthly production	Number of working days	Daily average
January	5,315	26	204	4,236	25	169	4,978	25	199	5,019	25	201
February	6,952	24.5	284	3,671	23.5	156	3,646	23.5	155	4,169	23.5	177
March	3,051	26	117	4,795	27	178	4,257	27	158	3,652	27	135
April	4,757	25	190	6,779	25	271	3,149	25	126	5,367	24	224
May	5,104	25	204	4,361	25	174	4,400	25	176	5,141	26	198
June	4,292	26	165	4,635	26	178	4,450	26	171	3,577	26	138
July	3,912	26	151	2,748	26	106	2,580	25	103	2,951	25	118
August	3,492	26	134	2,903	26	112	2,735	27	101	3,883	27	144
September	3,861	25	154	3,682	25	147	3,388	25	136	4,840	25	194
October	4,593	26	177	4,848	25	194	4,180	25	167	4,985	25	199
November	4,320	23	188	4,439	24	185	3,803	24	159	3,989	24	166
December	4,931	26	190	4,759	26	183	4,533	26	174	3,914	25	157
	54,580	304.5	179	51,856	303.5	171	46,099	303.5	152	51,487	302.5	170

[1] Production is estimated from weekly car loadings as reported by the Association of American Railroads and includes mine fuel, coal sold locally, and dredge coal. Does not include an unknown amount of "bootleg" production. In computing the average rates per working day, New Year's, Eight-hour Day (Apr. 1), Memorial Day, Independence Day, Labor Day, Mitchell Day (Oct. 29), Thanksgiving Day, Christmas, and, since the war, Armistice Day, have been counted as holidays. Beginning with 1927, Washington's Birthday is counted as a half holiday. No allowance, however, has been made for church holy days, which are observed by many of the miners. Monthly statistics from 1905 to 1925 will be found in Coal in 1925, pp. 427–428, and from 1926 to 1930 in Coal in 1930, p. 741.

Illicit coal.—A survey by the Pennsylvania Department of Mines shows that, in the latter part of 1939, 2,500 illicit or "bootleg" holes were in operation in the Pennsylvania anthracite region and that 9,000 men were employed. November production is shown as 340,000 tons. There were 337 breakers in the region, and 1,353 truckers hauled coal to the breakers. The estimated illicit production of coal in the region in 1939 was between 3,500,000 and 4,000,000 tons, or about 8 percent of the total Pennsylvania anthracite output. Competition resulting from the production of illicit coal is out of all proportion to the tonnage produced. Low market prices are possible because the capital invested is small and nothing is paid for the coal. Wages are well below the regular scale. Safety measures are inadequate, and 58 lives were reported lost during the year.

Regions, fields, and counties.—The main anthracite region covers an elongated area of about 480 square miles in eastern Pennsylvania, with its longer axis running northeast and southwest. It embraces three subregions as follows, from the northeast to the southwest: The Wyoming region, which covers a single geologic anthracite basin and is about 54 miles long by 6 miles wide at its widest point; the Lehigh region, which comprises the anthracite lands tributary to the Lehigh River that forms its eastern boundary and contains the Eastern Middle field and the section of the Southern field lying east of Tamaqua; and the Schuylkill region, which consists of the Western Middle field and the section of the Southern field lying west of Tamaqua.

The area may also be divided into four fields, using the grouping of the anthracite geologic basins as a framework, as follows: The Northern field, which is the same as the Wyoming region; the Eastern Middle or Lehigh field, which consists of a group of at least 10 small basins; the Western Middle field, a single basin about 36 miles long by 4½ miles at its widest point; and the Southern field, also a single basin, about 54 miles long by 6 miles at its widest point, which breaks into a long "fishtail" toward its western ends.

Both classifications (by regions and by fields) are used in the Bureau tables.

In order of magnitude of present production, the Northern field comes first, followed by the Western Middle, the Southern, and the Eastern Middle.

In order of length of life, based upon estimated minable reserves, the Southern field comes first, followed by the Western Middle, the Northern, and the Eastern Middle fields.

TABLE 9.—*Pennsylvania anthracite shipped, sold locally, and used as colliery fuel in 1939, by regions*

Region	Shipments		Local sales		Colliery fuel		Total	
	Net tons	Value [1]	Net tons	Value	Net tons	Value	Net tons	Value [1]
Lehigh:								
Breakers [2]	8,034,425	$30,639,000	265,076	$1,219,000	376,432	$655,000	8,675,933	$32,513,000
Dredges	48,054	55,000	14,080	18,000			62,134	73,000
Total Lehigh	8,082,479	30,694,000	279,156	1,237,000	376,432	655,000	8,738,067	32,586,000
Schuylkill:								
Breakers	11,376,935	41,468,000	523,311	1,536,000	306,430	464,000	12,206,676	43,468,000
Washeries	1,675,510	3,652,000	51,642	186,000	35,499	48,000	1,762,651	3,886,000
Dredges	517,182	530,000	106,317	110,000	1,160	1,000	624,659	641,000
Total Schuylkill	13,569,627	45,650,000	681,270	1,832,000	343,089	513,000	14,593,986	47,995,000
Wyoming:								
Breakers	24,242,243	95,849,000	1,971,337	8,202,000	1,592,887	1,731,000	27,806,467	105,782,000
Washeries	90,874	235,000	105,505	347,000	98,724	102,000	295,103	684,000
Dredges			17,067	32,000			17,067	32,000
Total Wyoming	24,333,117	96,084,000	2,093,909	8,581,000	1,691,611	1,833,000	28,118,637	106,498,000
Total, excluding Sullivan County:								
Breakers [2]	43,653,603	167,956,000	2,759,724	10,957,000	2,275,749	2,850,000	48,689,076	181,763,000
Washeries [2]	1,766,384	3,887,000	157,147	533,000	134,223	150,000	2,057,754	4,570,000
Dredges	565,236	585,000	137,464	160,000	1,160	1,000	703,860	746,000
Total	45,985,223	172,428,000	3,054,335	11,650,000	2,411,132	3,001,000	51,450,690	187,079,000
Sullivan County: [3] Breakers	7,059	17,000	26,738	76,000	2,890	3,000	36,687	96,000
Grand total: 1939	45,992,282	172,445,000	3,081,073	11,726,000	2,414,022	3,004,000	51,487,377	187,175,000
1938	41,063,869	166,839,000	2,722,206	10,682,000	2,312,952	3,079,000	46,099,027	180,600,000
Change, 1939 ..... percent	+12.0	+3.4	+13.2	+9.8	+4.4	−2.4	+11.7	+3.6

[1] Value given is value at which coal left possession of producing company, f. o. b. mines, and does not include margins of separately incorporated sales companies.
[2] Small quantity of washery coal included with breaker.
[3] For purposes of historical comparison and statistical convenience the mines of Sullivan County are grouped with the Pennsylvania anthracite region, although the product is classified as semianthracite according to the American Society for Testing Materials Tentative Standard.

TABLE 10.—*Pennsylvania anthracite produced, by fields, 1935–39, in net tons*

[The figures of breaker product include a certain quantity of culm-bank coal, which amounted to 583,564 tons in 1938. Data for 1913–25 will be found in Coal in 1925, p. 517, and for 1926–30 in Coal in 1930, p. 747]

Field	1935	1936	1937	1938	1939
Eastern Middle: Breakers	5,248,176	6,102,979	6,045,813	5,217,169	[1] 5,444,335
Western Middle:					
Breakers	10,231,664	11,469,078	10,381,521	8,877,485	9,242,223
Washeries	1,483,023	1,510,913	1,456,505	940,938	906,992
Dredges	231,711	221,800	264,588	223,961	253,819
Total Western Middle	11,946,398	13,201,791	12,102,614	10,042,384	10,403,034
Southern:					
Breakers	6,091,307	6,439,213	5,849,381	5,447,804	6,196,051
Washeries	99,204	438,465	218,541	625,335	855,659
Dredges	339,529	303,984	468,386	317,572	432,974
Total Southern	6,530,040	7,181,662	6,536,308	6,390,711	7,484,684
Northern:					
Breakers	27,700,235	27,448,035	26,707,743	24,059,598	27,806,467
Washeries	524,742	405,615	347,959	310,491	295,103
Dredges	19,227	20,900	27,500	29,491	17,067
Total Northern	28,244,204	27,874,550	27,083,202	24,399,580	28,118,637
Total, excluding Sullivan County:					
Breakers	49,271,382	51,459,305	48,984,458	43,602,056	[1] 48,689,076
Washeries	2,106,969	2,354,993	2,023,005	1,876,764	[1] 2,057,754
Dredges	590,467	546,684	760,474	571,024	703,860
	51,968,818	54,360,982	51,767,937	46,049,844	51,450,690
Sullivan County: Breakers	189,965	218,553	88,496	49,183	36,687
Grand total	52,158,783	54,579,535	51,856,433	46,099,027	51,487,377

[1] Small amount of washery coal included with breaker.

TABLE 11.—*Pennsylvania anthracite produced in 1939, by counties*

County	Shipments		Local sales		Colliery fuel		Total	
	Net tons	Value [1]	Net tons	Value	Net tons	Value	Net tons	Value [1]
Carbon	2,016,250	$7,181,000	83,468	$344,000	75,799	$180,000	2,175,517	$7,705,000
Columbia	206,692	778,000	32,181	45,000	6,023	7,000	244,896	830,000
Dauphin and Lebanon	517,076	1,878,000	61,515	92,000	4,413	7,000	583,004	1,977,000
Lackawanna	7,403,435	29,150,000	801,767	3,287,000	512,466	659,000	8,717,668	33,176,000
Luzerne	20,519,161	81,339,000	1,444,803	5,938,000	1,382,402	1,517,000	23,346,366	88,794,000
Northumberland	4,755,164	16,512,000	326,028	836,000	48,437	81,000	5,129,629	17,429,000
Schuylkill	10,327,279	34,901,000	280,764	988,000	377,796	543,000	10,985,749	36,432,000
Sullivan	7,059	17,000	26,738	76,000	2,890	3,000	36,687	96,000
Susquehanna and Wayne	155,240	595,000	3,692	15,000	3,886	7,000	162,818	617,000
Berks, Northampton, and York [2]	84,926	94,000	20,117	25,000	----------	----------	105,043	119,000
	45,992,282	172,445,000	3,081,073	11,726,000	2,414,022	3,004,000	51,487,377	187,175,000

[1] Value given for shipments is value at which coal left possession of producing company, f. o. b. mines and does not include margins of separately incorporated sales companies.
[2] Counties producing dredge coal only.

Fresh-mined and culm-bank coal, breaker, and washery product.—Anthracite is now produced from three sources—from mines, from old culm banks, and from the rivers that drain the anthracite region. As the three sources contribute to the country's supply, it is important to consider all of them to ascertain the total production. No difficulty is experienced in assembling the figures of production by dredges, as these are separate, distinct operations. A statistical detail requiring especial attention is the occasional practice of putting culm-bank coal through a breaker, either directly from the bank or after preliminary treatment in a washery. Table 14 shows the aggregate annual tonnages of culm-bank coal so treated.

TABLE 12.—*Pennsylvania anthracite produced in 1939, classified as fresh-mined, culm-bank, and river coal and as breaker, washery, and dredge product, by regions, in net tons*

[Exclusive of change in stock]

Region and type of plant	From mines			From culm banks	From river dredging	Total
	Underground		Strip pits			
	Mechanically loaded	Hand-loaded				
Lehigh:						
Breakers [1]	701,710	5,693,188	2,217,799	64,180		8,676,877
Dredges					62,134	62,134
Total Lehigh	701,710	5,693,188	2,217,799	64,180	62,134	8,739,011
Schuylkill:						
Breakers	1,519,048	7,848,985	2,337,985	451,499		12,157,517
Washeries			60,188	1,708,049		1,768,237
Dredges					624,659	624,659
Total Schuylkill	1,519,048	7,848,985	2,398,173	2,159,548	624,659	14,550,413
Wyoming:						
Breakers	9,553,075	17,218,855	853,937	69,885		27,695,752
Washeries			16,570	290,201		306,771
Dredges					17,067	17,067
Total Wyoming	9,553,075	17,218,855	870,507	360,086	17,067	28,019,590
Total, excluding Sullivan County:						
Breakers [1]	11,773,833	30,761,028	5,409,721	585,564		48,530,146
Washeries			76,758	1,998,250		2,075,008
Dredges					703,860	703,860
Total	11,773,833	30,761,028	5,486,479	2,583,814	703,860	51,309,014
Sullivan County: Breakers		36,687				36,687
Grand total: 1939	11,773,833	30,797,715	5,486,479	2,583,814	703,860	51,345,701
1938	10,151,669	27,990,628	5,095,341	2,340,444	571,024	46,149,106
Change, 1939 ..... percent	+16.0	+10.0	+7.7	+10.4	+23.3	+11.3

[1] Small quantity of washery coal included with breaker.

TABLE 13.—*Pennsylvania anthracite produced in 1939, classified as fresh-mined, culm-bank, and river coal and as breaker, washery, and dredge product, by fields, in net tons*

[Exclusive of change in stock]

Field and type of plant	From mines			From culm banks	From river dredging	Total
	Underground		Strip pits			
	Mechanically loaded	Hand-loaded				
Eastern Middle: Breakers[1]	701,710	3,241,003	1,486,049	16,517		5,445,279
Western Middle:						
Breakers	1,438,763	5,969,632	1,584,437	203,947		9,196,779
Washeries			60,188	846,804		906,992
Dredges					253,819	253,819
Total Western Middle	1,438,763	5,969,632	1,644,625	1,050,751	253,819	10,357,590
Southern:						
Breakers	80,285	4,331,538	1,485,298	295,215		6,192,336
Washeries				861,245		861,245
Dredges					432,974	432,974
Total Southern	80,285	4,331,538	1,485,298	1,156,460	432,974	7,486,555
Northern:						
Breakers	9,553,075	17,218,855	853,937	69,885		27,695,752
Washeries			16,570	290,201		306,771
Dredges					17,067	17,067
Total Northern	9,553,075	17,218,855	870,507	360,086	17,067	28,019,590
Total, excluding Sullivan County:						
Breakers[1]	11,773,833	30,761,028	5,409,721	585,564		48,530,146
Washeries			76,758	1,998,250		2,075,008
Dredges					703,860	703,860
Total	11,773,833	30,761,028	5,486,479	2,583,814	703,860	51,309,014
Sullivan County: Breakers		36,687				36,687
Grand total	11,773,833	30,797,715	5,486,479	2,583,814	703,860	51,345,701

[1] Small quantity of washery coal included with breaker.

TABLE 14.—*Culm-bank coal put through breakers, 1935–39, by fields, in net tons*

Year	Northern	Eastern Middle	Western Middle	Southern	Total[1]
1935	236,000	143,000	61,000	177,000	617,000
1936	122,000	84,000	148,000	633,000	987,000
1937	95,000	67,000	102,000	606,000	870,000
1938	52,000	11,000	44,000	455,000	562,000
1939	70,000	17,000	204,000	295,000	586,000

[1] No culm-bank coal is put through breakers in Sullivan County.

SHIPMENTS, BY REGIONS AND SIZES

Shipments of anthracite, by regions and sizes, are given in table 15.

TABLE 15.—*Pennsylvania anthracite shipped in 1939, by regions and sizes* [1]

Size	Breaker shipments						Washery shipments	Dredge shipments	Grand total
	Lehigh region	Schuylkill region	Wyoming region	Sullivan County	Total: Excluding Sullivan County	Total: Including Sullivan County			
Net tons									
Lump [2] and broken	40,410	45,811	162,669		248,890	248,890			248,890
Egg	323,367	440,720	1,509,589		2,273,676	2,273,676	1,316		2,274,992
Stove	1,854,824	2,168,049	6,503,860	993	10,526,733	10,527,726	29,955		10,557,681
Chestnut	2,000,644	2,715,965	6,569,994	1,365	11,286,603	11,287,968	168,672		11,456,640
Pea	941,541	1,319,876	2,536,587	952	4,798,004	4,798,956	167,090	383	4,966,429
Total domestic	5,160,786	6,690,421	17,282,699	3,310	29,133,906	29,137,216	367,033	383	29,504,632
Buckwheat No. 1	1,246,469	1,794,366	3,185,426	640	6,226,261	6,226,901	331,589	11,412	6,569,902
Buckwheat No. 2 (Rice) [3]	668,822	1,010,288	1,731,591	1,046	3,410,701	3,411,747	297,990	27,920	3,737,657
Buckwheat No. 3 (Barley)	670,342	1,333,274	1,701,841		3,705,457	3,705,457	450,330	182,626	4,338,413
Buckwheat No. 4	249,721	395,436	251,046		896,203	896,203	289,983	219,066	1,405,252
Boiler								12,300	12,300
Other	33,601	153,150	89,640	2,063	276,481	278,544	34,053	111,529	424,126
Total steam [4]	2,869,045	4,686,514	6,959,544	3,749	14,515,103	14,518,852	1,403,945	564,853	16,487,650
Grand total	8,029,831	11,376,935	24,242,243	7,059	43,649,009	43,656,068	1,770,978	565,236	45,992,282
Value									
Lump [2] and broken	$199,000	$241,000	$713,000		$1,153,000	$1,153,000			$1,153,000
Egg	1,528,000	2,180,000	7,049,000		10,757,000	10,757,000	$6,000		10,763,000
Stove	9,031,000	10,795,000	31,146,000	$4,000	50,972,000	50,976,000	136,000		51,112,000
Chestnut	9,911,000	13,530,000	31,482,000	6,000	54,923,000	54,929,000	741,000		55,670,000
Pea	3,515,000	4,868,000	9,123,000	3,000	17,506,000	17,509,000	578,000	$1,000	18,088,000
Total domestic	24,184,000	31,614,000	79,513,000	13,000	135,311,000	135,324,000	1,461,000	1,000	136,786,000
Buckwheat No. 1	3,657,000	5,095,000	9,315,000	2,000	18,067,000	18,069,000	897,000	28,000	18,994,000
Buckwheat No. 2 (Rice) [3]	1,448,000	2,228,000	3,821,000	1,000	7,497,000	7,498,000	615,000	45,000	8,158,000
Buckwheat No. 3 (Barley)	1,107,000	2,007,000	2,893,000		6,007,000	6,007,000	660,000	178,000	6,845,000

Buckwheat No. 4	215,000	358,000	235,000	----------	808,000	808,000	239,000	141,000	1,188,000
Boiler	----------	----------	----------	----------	----------	----------	----------	12,000	12,000
Other	20,000	166,000	72,000	1,000	258,000	259,000	23,000	180,000	462,000
Total steam [4]	6,447,000	9,854,000	16,336,000	4,000	32,637,000	32,641,000	2,434,000	584,000	35,659,000
Grand total	30,631,000	41,468,000	95,849,000	17,000	167,948,000	167,965,000	3,895,000	585,000	172,445,000
Average value per ton									
Lump [3] and broken	$4.92	$5.26	$4.38	----------	$4.63	$4.63	----------	----------	$4.63
Egg	4.73	4.95	4.67	----------	4.73	4.73	$4.56	----------	4.73
Stove	4.87	4.98	4.79	$4.03	4.84	4.84	4.54	----------	4.84
Chestnut	4.95	4.98	4.79	4.40	4.87	4.87	4.39	----------	4.86
Pea	3.73	3.69	3.60	3.15	3.65	3.65	3.46	$2.61	3.64
Total domestic	4.69	4.73	4.60	3.93	4.64	4.64	3.98	2.61	4.64
Buckwheat No. 1	2.93	2.84	2.92	3.13	2.90	2.90	2.71	2.45	2.89
Buckwheat No. 2 (Rice) [3]	2.17	2.21	2.21	.96	2.20	2.20	2.06	1.61	2.18
Buckwheat No. 3 (Barley)	1.65	1.51	1.70	----------	1.62	1.62	1.47	.97	1.58
Buckwheat No. 4	.86	.91	.94	----------	.90	.90	.82	.64	.85
Boiler	----------	----------	----------	----------	----------	----------	----------	.98	.98
Other	.59	1.08	.80	.48	.93	.93	.68	1.61	1.09
Total steam [4]	2.25	2.10	2.35	1.07	2.25	2.25	1.73	1.03	2.16
Grand total	3.81	3.64	3.95	2.41	3.85	3.85	2.20	1.03	3.75

[1] Figures of shipments from breakers include 585,564 tons of culm-bank coal handled in the breakers.

[2] The quantity of lump included is insignificant.

[3] Includes Birdseye.

[4] Includes all steam sizes.

Table 16 reveals an interregional variation in the breaker production of domestic sizes as related to that of steam sizes and to total production. In 1939 the Wyoming region produced 71 percent domestic sizes and 29 percent steam sizes from a given tonnage of breaker feed; the Lehigh region, 64 percent domestic and 36 percent steam sizes; and the Schuylkill region, 59 percent domestic and 41 percent steam sizes. These percentages are relatively constant from year to year. The variations among the regions are due to differences in the physical situation and condition of the anthracite beds.

TABLE 16.—*Sizes of Pennsylvania anthracite shipped from breakers, 1937–39, by regions, in percent of total*

[Note that shipments of dredge and washery coal are not included]

Size of coal	Percent of total shipments								
	Lehigh region			Schuylkill region			Wyoming region		
	1937	1938	1939	1937	1938	1939	1937	1938	1939
Lump [1] and broken	0.5	0.4	0.5	0.5	0.4	0.4	0.3	0.2	0.7
Egg	4.8	4.5	4.0	4.9	4.2	3.9	6.5	6.3	6.2
Stove	21.0	23.0	23.1	18.1	19.3	19.0	24.7	26.2	26.8
Chestnut	25.6	24.7	24.9	23.0	23.6	23.9	28.1	27.6	27.1
Pea	11.5	12.0	11.8	11.0	11.0	11.6	10.4	10.0	10.3
Total domestic	63.4	64.6	64.3	57.5	58.5	58.8	70.0	70.3	71.3
Buckwheat No. 1	15.9	15.6	15.5	15.8	16.3	15.8	13.7	13.7	13.2
Buckwheat No. 2 (Rice) [2]	8.4	8.3	8.3	8.7	8.8	8.9	7.2	7.1	7.1
Buckwheat No. 3 (Barley)	9.2	8.5	8.4	11.2	10.7	11.7	7.7	7.5	7.0
Boiler									
Other, including Buckwheat No. 4	3.1	3.0	3.5	6.8	5.7	4.8	1.4	1.4	1.4
Total steam [3]	36.6	35.4	35.7	42.5	41.5	41.2	30.0	29.7	28.7

Size of coal	Sullivan County			Total					
				Excluding Sullivan County			Including Sullivan County		
Lump [1] and broken		11.3		0.4	0.3	0.6	0.4	0.3	0.6
Egg	1.8			5.7	5.4	5.2	5.7	5.4	5.2
Stove	15.9	10.8	14.1	22.2	23.7	24.1	22.1	23.7	24.1
Chestnut	15.8	26.4	19.3	26.2	26.0	25.8	26.2	26.0	25.8
Pea	9.5	16.6	13.5	10.7	10.6	11.0	10.8	10.6	11.0
Total domestic	43.0	65.1	46.9	65.2	66.0	66.7	65.2	66.0	66.7
Buckwheat No. 1	10.2	10.6	9.1	14.7	14.8	14.3	14.7	14.8	14.3
Buckwheat No. 2 (Rice) [2]	12.8	14.7	14.8	7.9	7.7	7.8	7.9	7.7	7.8
Buckwheat No. 3 (Barley)				9.0	8.6	8.5	8.9	8.6	8.5
Boiler	2.3			(4)			(4)		
Other, including Buckwheat No. 4	31.7	9.6	29.2	3.3	2.9	2.7	3.3	2.9	2.7
Total steam [3]	57.0	34.9	53.1	34.8	34.0	33.3	34.8	34.0	33.3

[1] The quantity of lump included is insignificant.
[2] Includes Birdseye.
[3] Includes all steam sizes.
[4] Less than 0.1 percent.

AVERAGE SALES REALIZATION

The valuation figures in this study represent value at the breaker or washery reported by the operating companies. The company is requested to "estimate value of the product not sold" and to "exclude selling expenses" in making its report.

From this it will be seen that when a producing company sells its output to a separately organized sales company (the practice of many, including certain larger producers) the value reported will exclude the margin of the sales company and may therefore be somewhat less than the circular price at which the coal is placed on the general market. This fact should be borne in mind in considering the variations in value between different regions shown in the tables for the same sizes of coal.

The average sales realization per net ton on breaker shipments only fell to $3.85 in 1939 from $4.16 in 1938, or 7 percent. By far the greater decrease was in the domestic sizes—9 percent. The drop in steam sizes was only 3 percent.

If local sales, colliery fuel, and washery and dredge coal are included, the average value per net ton on the total 1939 production was $3.64 compared with $3.92 in 1938. (See table 18.)

TABLE 17.—*Average sales realization per net ton on Pennsylvania anthracite shipments from breakers, 1937–39, by regions and sizes*

[Value does not include margins of separately incorporated sales companies]

Size	Lehigh region			Schuylkill region			Wyoming region		
	1937	1938	1939	1937	1938	1939	1937	1938	1939
Lump [1] and broken	$4.96	$5.17	$4.92	$5.24	$5.50	$5.26	$5.01	$5.16	$4.38
Egg	5.01	5.11	4.73	5.14	5.27	4.95	5.04	5.16	4.67
Stove	5.25	5.36	4.87	5.26	5.39	4.98	5.19	5.31	4.79
Chestnut	5.25	5.43	4.95	5.31	5.41	4.98	5.20	5.32	4.79
Pea	4.04	3.93	3.73	3.96	3.80	3.69	4.02	3.91	3.60
Total domestic	5.01	5.10	4.69	5.02	5.09	4.73	5.00	5.10	4.60
Buckwheat No. 1	2.98	3.06	2.93	2.87	2.93	2.84	3.00	3.08	2.92
Buckwheat No. 2 (Rice) [2]	2.29	2.36	2.17	2.17	2.27	2.21	2.31	2.39	2.21
Buckwheat No. 3 (Barley)	1.43	1.61	1.65	1.33	1.50	1.51	1.55	1.69	1.70
Total steam [3]	2.24	2.35	2.25	1.99	2.13	2.10	2.37	2.47	2.35
Total all sizes	3.99	4.13	3.81	3.73	3.86	3.64	4.21	4.32	3.95

Size	Sullivan County			Total					
				Excluding Sullivan County			Including Sullivan County		
Lump [1] and broken		$3.00		$5.08	$5.28	$4.63	$5.08	$5.24	$4.63
Egg	$3.97			5.06	5.18	4.73	5.06	5.18	4.73
Stove	4.46	3.00	$4.03	5.21	5.33	4.84	5.21	5.33	4.84
Chestnut	3.07	3.00	4.40	5.23	5.36	4.87	5.23	5.36	4.87
Pea	2.56	2.52	3.15	4.01	3.88	3.65	4.01	3.88	3.65
Total domestic	3.51	2.88	3.93	5.01	5.10	4.64	5.01	5.10	4.64
Buckwheat No. 1	2.00	1.50	3.13	2.95	3.03	2.90	2.95	3.03	2.90
Buckwheat No. 2 (Rice) [2]	.75	.50	.96	2.26	2.35	2.20	2.26	2.35	2.20
Buckwheat No. 3 (Barley)				1.45	1.61	1.62	1.45	1.61	1.62
Total steam [3]	1.03	.73	1.07	2.21	2.33	2.25	2.21	2.33	2.25
Total all sizes	2.10	2.13	2.41	4.03	4.16	3.85	4.03	4.16	3.85

[1] The quantity of lump included is insignificant. [2] Includes Birdseye. [3] Includes all steam sizes.

TABLE 18.—*Average value per net ton of Pennsylvania anthracite shipped, local sales, colliery fuel, and total production, 1938–39, by regions* [1]

[Note that values in this table include washery and dredge coal]

Region	1938				1939			
	Shipments	Local sales	Colliery fuel	Total production	Shipments	Local sales	Colliery fuel	Total production
Lehigh	$4.11	$4.65	$1.80	$4.01	$3.80	$4.43	$1.74	$3.73
Schuylkill	3.63	3.00	1.56	3.51	3.36	2.69	1.50	3.29
Wyoming	4.31	4.35	1.13	4.12	3.95	4.10	1.08	3.79
Total, excluding Sullivan County	4.06	3.93	1.33	3.92	3.75	3.81	1.24	3.64
Sullivan County	2.13	2.92	.83	2.49	2.41	2.84	1.04	2.62
Grand total	4.06	3.92	1.33	3.92	3.75	3.81	1.24	3.64

[1] Value given for shipments is value at which coal left possession of producing company, f. o. b. mines, and does not include margins of separately incorporated sales companies.

NUMBER OF OPERATIONS

The total number of active plants reporting increased from 390 in 1937 to 442 in 1938. (See table 19.) Figures for 1939 are not yet available, but indications are that the upward trend continued.

TABLE 19.—*Number of active operations in the Pennsylvania anthracite industry in 1938* [1]

Region and type of product	Total active plants reporting [2]	Breakers [3]	Other preparation plant [4]	Washeries [5]	Culm banks operated in conjunction with breakers	Dredges	Reporting strip-pit tonnage
Lehigh:							
Breakers or mines	41	26	1		6		39
Dredges	2		1			2	
Total Lehigh	43	26	2		6	2	39
Schuylkill:							
Breakers or mines	76	34	12		6		35
Washeries	26			9			1
Dredges	31		21			31	
Total Schuylkill	127	34	33	9	6	31	36
Wyoming:							
Breakers or mines	254	76	3		3		36
Washeries	12			3			2
Dredges	1		1			1	
Total Wyoming	267	76	4	3	3	1	38
Total, excluding Sullivan County:							
Breakers	371	136	16		15		110
Washeries	32			12			3
Dredges	34		23			34	
	437	136	39	12	15	34	113
Sullivan County: Breakers	5	4					
Grand total	442	140	39	12	15	34	113

[1] Figures for 1939 not yet available.

[2] The number of active plants contains numerous duplications, that is, successions known and unknown, and leases and subleases. Each report received which was tabulated for production or for employment has been counted separately.

[3] Equipped to prepare standard sizes of fresh-mined coal.

[4] For preliminary crushing, screening, or cleaning. Usually old breakers are used for this purpose. The number reported for dredges represents reports showing men employed at tipple.

[5] Preparation plant for the sizing and cleaning of culm-bank coal.

LABOR STATISTICS

According to the Pennsylvania Department of Mines about 93,000 men were employed in the anthracite region in 1939. The number employed in 1938, as based upon direct reports to the Bureau of Mines from operators and including the employees of dredges and strip contractors, was 96,417.

Man-days lost on account of strikes were 0.2 percent less in 1938 than in 1937, and suspension of work owing to strikes and the number of men involved also declined. Comparable statistics covering 1939 are not yet available, but there were no widespread labor disputes during the year.

According to the Bureau of Labor Statistics, average weekly earnings ranged from a low of $17.16 in December to a high of $35.84 in May and averaged $25.52 during 1939, or 9 percent above the 1938 average. The index of employment (1929 average equals 100) fluctuated between 44.7 in July and 53 in April and averaged 3.3 percent below 1938. The index of pay rolls reached a low of 25.2 in July and a high of 57 in May and averaged 3.4 percent above 1938.

TABLE 20.—*Men employed and days worked at operations producing Pennsylvania anthracite in 1938* [1]

[Includes operations of strip contractors]

Region	Average number of men employed							Average number of days plant operated	Man-days of labor	Average tons per man per day
	Underground			Surface						
	Miners and their laborers	Other	Total underground	In strip pits	In preparation plant	Other	Total surface	Grand total				
Lehigh:												
Breaker	6,936	4,254	11,190	1,604	1,393	2,929	5,926	17,116	165	2,817,785	2.73
Dredge					4	12	16	16	166	2,653	20.45
Total Lehigh	6,936	4,254	11,190	1,604	1,397	2,941	5,942	17,132	165	2,820,438	2.75
Schuylkill:												
Breaker	9,694	6,626	16,320	1,453	1,726	3,604	6,783	23,103	180	4,159,058	2.85
Washery				32	229	554	815	815	178	145,393 [2]	10.77
Dredge					88	167	255	255	136	34,648	14.06
Total Schuylkill	9,694	6,626	16,320	1,485	2,043	4,325	7,853	24,173	180	4,339,099	3.20
Wyoming:												
Breaker	31,134	13,570	44,704	542	2,709	6,768	10,019	54,723	170	9,319,906	2.58
Washery				11	25	97	133	133	204	27,183 [2]	11.42
Dredge					18	6	24	24	204	4,896	6.02
Total Wyoming	31,134	13,570	44,704	553	2,752	6,871	10,176	54,880	170	9,351,985	2.61
Total, excluding Sullivan County:												
Breaker	47,764	24,450	72,214	3,599	5,828	13,301	22,728	[3] 94,942	172	16,296,749	2.68
Washery				43	254	651	948	[3] 948	182	172,576 [2]	10.88
Dredge					110	185	295	295	143	42,197	13.53
	47,764	24,450	72,214	3,642	6,192	14,137	23,971	96,185	172	16,511,522	2.79
Sullivan County: Breaker	128	45	173		13	46	59	232	95	22,011	2.23
Grand total	47,892	24,495	72,387	3,642	6,205	14,183	24,030	96,417	171	16,533,533	2.79

[1] Figures for 1939 not yet available.
[2] Represents washeries for which both production and employment were separately reported.
[3] The men shown at breakers include a number of washery employees who could not be separated from breaker employees.

TABLE 21.—*Men employed at operations producing Pennsylvania anthracite in 1938, by counties* [1]

[Includes operations of strip contractors]

County	Men	County	Men
Carbon	4,207	Schuylkill	19,317
Columbia	1,032	Sullivan	232
Dauphin	1,090	Susquehanna and Wayne	388
Lackawanna	17,091	Berks, Lebanon, Northampton, and York [2]	53
Luzerne	45,680		
Northumberland	7,327		96,417

[1] Figures for 1939 not yet available. [2] Counties producing dredge coal only.

TABLE 22.—*Strikes, suspensions, and lock-outs in the Pennsylvania anthracite region in 1938* [1]

	Lehigh	Schuylkill	Wyoming	Sullivan County	Total	
					Excluding Sullivan County	Including Sullivan County
Total number employed	17,132	24,173	54,880	232	96,185	96,417
Men on strike	10,194	13,743	3,498	----	27,435	27,435
Man-days lost on account of strike	127,477	235,052	216,928	----	579,457	579,457
Average days lost—						
Per man employed	7.4	9.7	4.0	----	6.0	6.0
Per man on strike	12.5	17.1	62.0	----	21.1	21.1

[1] Figures for 1939 not yet available.

EQUIPMENT AND METHODS OF MINING

Mechanical loading.—The percentage of total deep-mined production of anthracite loaded mechanically continued to increase. In 1939 the 11,773,833 tons so loaded were 27.7 percent of the total underground output compared with 26.6 percent (10,151,669 tons) in 1938 and 25.1 percent (10,683,837 tons) in 1937. The total tonnage loaded mechanically underground increased 16 percent from 1938 to 1939; hand-loading advanced 10 percent.

There were 8 scrapers and 216 conveyors (including hand-loaded conveyors and conveyors equipped with duckbills or other self-loading heads) sold in the anthracite region in 1939; some were installed late in the year. No sales of mobile loading machines were reported. Returns direct from operators indicated that 535 scrapers and 1,997 conveyors were in use during the year.

TABLE 23.—*Relative growth of mechanical loading, hand loading, and stripping in Pennsylvania anthracite mines, 1935–39*

[Mechanical loading includes coal handled on pit-car loaders and hand-loaded face conveyors]

Year	Net tons			Index numbers, 1927=100		
	Mechanical loading underground	Stripping	Hand loading	Mechanical loading underground	Stripping	Hand loading
1935	9,279,000	5,187,000	34,400,000	417	241	48
1936	10,828,000	6,203,000	33,899,000	487	288	47
1937	10,684,000	5,696,000	31,883,000	481	265	45
1938	10,152,000	5,095,000	27,990,000	457	237	39
1939	11,774,000	5,486,000	30,798,000	530	255	43

TABLE 24.—*Pennsylvania anthracite loaded mechanically underground, 1935–39*

Year	Scrapers		Conveyors and pit-car loaders [1]		Total loaded mechanically	
	Number of units	Net tons loaded	Number of units	Net tons handled	Number of units	Net tons handled
1935	[2] 508	[2] 2,662,026	1,615	6,617,031	2,123	9,279,057
1936	[2] 504	[2] 2,966,407	1,790	7,861,539	2,294	10,827,946
1937	539	2,873,289	[2] 1,855	[2] 7,810,548	2,394	10,683,837
1938	545	2,589,954	[2] 1,831	[2] 7,561,715	2,376	10,151,669
1939	535	3,088,956	1,997	8,684,877	2,532	11,773,833

[1] Includes duckbills and other self-loading conveyors, which account for only a small part of the total.
[2] Includes mobile loaders.

TABLE 25.—*Pennsylvania anthracite handled by mobile loaders and scrapers and by all types of conveyors in 1939, by fields, in net tons*

Field	Scraper loaders	Pit-car loaders	Hand-loaded face conveyors, all types [1]	Total mechanically loaded underground
Northern	2,518,347		7,034,728	9,553,075
Eastern Middle	150,922	17,368	533,420	701,710
Western Middle	419,687	67,680	1,031,681	1,519,048
Southern				
	3,088,956	85,048	8,599,829	11,773,833

[1] Shaker chutes, etc., including those equipped with duckbills.

Cutting machines.—The number of cutting machines in use in 1939 was less than in 1938, but a larger tonnage was cut by machines.

TABLE 26.—*Pennsylvania anthracite cut by machines, 1938–39*

Region	1938			1939		
	Cutting machines		Net tons cut by machines	Cutting machines		Net tons cut by machines
	Permissible	All other types		Permissible	All other types	
Lehigh						
Schuylkill						
Wyoming	150	89	1,583,907	145	80	1,881,884
Total, excluding Sullivan County	150	89	1,583,907	145	80	1,881,884
Sullivan County		3	4,500			
Grand total	150	92	1,588,407	145	80	1,881,884

Strip-pit mining.—The percentage of fresh-mined anthracite produced from strip pits remained virtually constant—11.4 percent in 1939 and 11.8 percent in 1938. The tonnage mined by this method in 1939 rose in all regions. Table 27 gives the figures for several years.

TABLE 27.—*Relative growth of Pennsylvania anthracite mined from strip pits, 1915, 1920, 1925, 1930, and 1937–39, in net tons*

Year	Number of power shovels in use [1]	Quantity mined by stripping		Percent of fresh-mined total that was stripped	Number of men employed	Average number of days worked
		Total	Average per shovel			
1915	57	1,121,603	19,677	[2]	[2]	[2]
1920	96	2,054,441	21,400	2.5	[2]	[2]
1925	97	1,578,478	16,273	2.7	[2]	[2]
1930	108	2,526,288	23,484	3.7	[2]	[2]
1937	351	5,696,018	16,228	11.9	4,585	184
1938	331	5,095,341	15,394	11.8	3,642	186
1939:						
Lehigh region	134	2,217,799	16,551	25.8	[2]	[2]
Schuylkill region	121	2,398,173	19,820	20.4	[2]	[2]
Wyoming region	91	870,507	9,566	3.2	[2]	[2]
Total, 1939 [3]	[4] 346	5,486,479	15,857	11.4	[2]	[2]

[1] Certain of the equipment reported by stripping contractors may have been counted twice when moved from one small job to another during the year. The amount of such double counting is unknown but presumably is not great.

[2] Data not available.

[3] There was no strip-pit mining in Sullivan County during 1939.

[4] Includes 109 gasoline, 15 steam, 47 electric, 166 Diesel, and 9 other types of shovels.

Dredge operations.—Both the tonnage and average value of anthracite produced by dredges increased in 1939 compared with 1938.

TABLE 28.—*Pennsylvania anthracite produced by dredges, 1938–39, by rivers*

River (including tributaries)	1938			1939		
	Dredges	Net tons	Value	Dredges	Net tons	Value
Lehigh	5	123,452	$124,795	3	62,134	$73,000
Schuylkill				3	67,539	62,000
Susquehanna	29	447,572	445,784	25	574,187	611,000
	34	571,024	570,579	31	703,860	746,000

TABLE 29.—*Average receipts per net ton on all dredge coal sold, 1935–39*

Year	Average receipts	Year	Average receipts
1935	$0.88	1938	$1.00
1936	1.06	1939	1.06
1937	1.11		

FOREIGN TRADE [4]

Exports of anthracite in 1939 increased 36 percent over 1938 and comprised 5 percent of the domestic production. Imports declined 18 percent and were equivalent to 0.6 percent of United States output; the U. S. S. R. supplied 71 percent, Great Britain 23 percent, French Indochina 4 percent, and Canada (reexports) 2 percent.

TABLE 30.—*Anthracite imported for consumption in the United States, 1938–39, by countries, in net tons*

Country	1938	1939	Country	1938	1939
Canada	2,487	7,111	U. S. S. R.	200,480	212,444
China		20	United Kingdom	154,104	66,784
Indochina (French)	5,824	11,794		362,895	298,153

TABLE 31.—*Anthracite imported for consumption in the United States, 1938–39, by customs districts, in net tons*

Customs district	1938	1939	Customs district	1938	1939
Connecticut	11,320	6,655	New York		20
Maine and New Hampshire	32,436	21,354	Rhode Island	54,642	48,240
Massachusetts	264,465	221,883	Vermont	3	1
Michigan	29			362,895	298,153

[4] Figures on imports and exports compiled by M. B. Price, of the Bureau of Mines, from records of the Bureau of Foreign and Domestic Commerce.

TABLE 32.—*Anthracite exported from the United States, 1938–39, by countries, in net tons*

Country	1938	1939	Country	1938	1939
North America:			North America—Continued.		
Bermuda	1,175	1,541	West Indies—Continued.		
Canada	1,895,718	2,577,157	Haiti		1
Central America:			Netherland	6	7
British Honduras		259	South America:		
Guatemala	13	90	Bolivia	265	
Honduras		1	Brazil	672	59
Nicaragua	22	8	Chile		1
Panama	1		Colombia	3	2
Mexico	179	150	Ecuador		1
Miquelon and St. Pierre Islands	45	62	Venezuela	15	
Newfoundland and Labrador	7,471	9,349	Europe:		
West Indies:			France	8	
British:			United Kingdom		49
Jamaica	11		Asia:		
Trinidad and Tobago	22		Japan	149	
Other British	268	221	Netherland India		778
Dominican Republic	2	242	Saudi Arabia	1	
French	2,865		Other Asia		22
				1,908,911	2,590,000

TABLE 33.—*Anthracite exported from the United States, 1938–39, by customs districts and ports of export, in net tons*

Customs district	1938	1939	Customs district	1938	1939
North Atlantic:			Pacific Coast:		
Maine and New Hampshire	20	703	Alaska	269	270
Massachusetts	294	86	Los Angeles	149	2
New York	33,756	44,846	San Diego	12	20
Philadelphia	34,908	48,000	San Francisco	8	11
South Atlantic:			Northern Border:		
Maryland	459		Buffalo	1,273,807	1,564,932
Virginia	2,865	353	Dakota	379	117
Gulf Coast:			Duluth and Superior	4,234	4,556
Florida	81	47	Michigan	4	
New Orleans	6	371	Ohio	5,068	14,501
Mexican Border:			Rochester	165,853	283,465
Arizona	59	37	St. Lawrence	385,011	625,239
El Paso	108	33	Vermont	1,561	2,369
San Antonio		22		1,908,911	2,590,000

The Canadian market.—The United States strengthened its position in the important Canadian anthracite market further in 1939, notwithstanding obstacles such as an import duty, the depreciated Canadian dollar in terms of United States currency, and Canadian subventions to aid its own coal industry. In 1939 the United States supplied 66 percent of Canada's total imports of anthracite compared with 53 percent in 1938. On the other hand, of the bituminous coal available in 1939 (production, plus imports, minus exports), the United States supplied 47 percent as against 49 percent in 1938. This decline indicates Canada's efforts to make greater use of its bituminous-coal resources. The tonnage of all coal available in 1939 (29,028,000 tons) was 6 percent more than in 1938. Details of the coal and coke industry and foreign trade of Canada are given in table 34.

TABLE 34.—*Coal and coke industry and foreign trade of Canada, 1938–39* [1]

[Thousands of net tons]

	Coal										Coke from coal	
	Anthracite		Bituminous		Subbituminous		Lignite		Total			
	1938	1939	1938	1939	1938	1939	1938	1939	1938	1939	1938	1939
Production	.....	.....	10,289	11,597	489	512	3,470	3,410	14,248	15,519	2,356	2,388
Imports:												
United States	1,974	2,606	9,644	9,836	.....	.....	3	3	11,621	12,445	407	434
Great Britain	1,199	1,035	66	68	.....	.....	.....	.....	1,265	1,103	3	2
Germany	407	294	35	.....	.....	.....	.....	.....	442	294	5	.....
Belgium	34	.....	.....	.....	.....	.....	.....	.....	34	.....	.....	.....
French Indochina	30	43	.....	.....	.....	.....	.....	.....	30	43	.....	.....
Netherlands	37	.....	.....	.....	.....	.....	.....	.....	37	.....	.....	.....
U. S. S. R.	15	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....
Morocco	20	.....	.....	.....	.....	.....	.....	.....	20	.....	.....	.....
Total imports	3,716	3,978	9,745	9,904	.....	.....	3	3	13,464	13,885	415	436
Exports	.....	.....	344	368	.....	.....	9	8	353	376	31	48
Available for consumption	3,716	3,978	19,690	21,133	489	512	3,464	3,405	27,359	29,028	2,740	2,776

[1] Quarterly Report on Coal and Coke Statistics for Canada, October–December 1938 and 1939. Canadian coal charged to ovens in 1938, 1,064,302 tons; 1939, 1,104,371 tons. Imported coal charged to ovens in 1938, 2,215,469 tons; 1939, 2,207,707 tons.

Imports of anthracite into Canada in 1939 were 3,977,805 tons, a gain of 7 percent over 1938. Of the total imports into Canada in 1938 and 1939, respectively, 60 and 64 percent were received from January to August, inclusive, before the outbreak of war in Europe. Of the total tonnage supplied by the United States in 1938 and 1939, respectively, 68 and 61 percent were received from January to August.

Canadian official statistics for 1939 show that of the total imports of anthracite into Canada 24 percent (941,017) tons were steam sizes—44 percent from Great Britain, 40 percent from the United States, 13 percent from Germany, and 3 percent from French Indochina.

The upward trend in the use of hydroelectricity, natural gas, and doubtless fuel oil continued. Although coal production in 1939 was 1,224,746 tons greater than in 1938, hydroelectric power, in terms of coal, increased 1,623,000 tons. Excluding 1937, coal production was greater in 1939 than in any year since 1929.

The tonnage of Canadian coal moved under assisted (railroad) rates continued to increase.

The additional subvention (not to exceed 50 cents a ton) granted November 8, 1938, by the Canadian Government to aid shipments of Nova Scotia bituminous coal to central Canada was withdrawn effective December 8, 1939.

In 1939 the Canadian Government appointed a coal administrator, and effective December 1, the coal industry and trade were required to operate under license.

The outlook for anthracite in Canada in 1940 is obscured by the international situation and developments that may result therefrom.

Among the possible developments is further depreciation of the Canadian dollar, which would facilitate the purchase of British anthracite. On the other hand, the increased cost of coal production in Britain and high ocean-freight and insurance rates should much more than offset the lower value of the Canadian dollar; however, as Britain will require Canadian timber and grain it seems probable that Canada will continue to receive British anthracite in order to conserve foreign exchange.

The trade agreement between the United States and U. S. S. R. was renewed in August for another year, during which period U. S. S. R. agreed not to ship more than 400,000 tons of anthracite to the United States.

World anthracite production.—Because of the international situation, anthracite production data for 1939 were not released in a number of countries. Available data for 1934–39 are presented in table 35.

TABLE 35.—*World production of anthracite, 1934–39, in metric tons*

[Compiled by R. B. Miller]

Country	1934	1935	1936	1937	1938	1939
Belgium	5, 823, 787	5, 241, 026	6, 077, 907	6, 694, 049	6, 874, 520	(1)
Bulgaria	6, 921	2, 223	2, 323	2, 542	4, 000	(1)
China	5, 309, 810	(1)	(1)	(1)	(1)	(1)
Chosen	982, 370	1, 079, 330	1, 051, 853	1, 101, 500	(1)	(1)
France	5, 900, 000	5, 000, 000	8, 227, 000	(1)	(1)	(1)
Germany	4, 539, 000	4, 886, 000	5, 511, 000	5, 627, 000	(1)	(1)
Indochina	1, 554, 600	1, 740, 606	2, 150, 654	2, 264, 978	2, 289, 832	2, 547, 000
Irish Free State	91, 171	87, 114	96, 742	106, 651	92, 157	90, 455
Italy	84, 547	70, 150	79, 972	95, 060	132, 197	100, 000
Japan [3]	(2)	(2)	(2)	(1)	(1)	(1)
Morocco, French	36, 070	52, 696	49, 388	107, 150	123, 200	115, 600
Peru	3, 600	2, 461	3, 535	2, 918	1, 500	1, 450
Portugal	196, 587	205, 373	207, 890	241, 163	281, 740	294, 081
Rumania	18, 010	17, 207	3, 708	3, 646	3, 266	(2)
Spain	644, 621	701, 789	(2)	(1)	493, 539	663, 593
Switzerland	3, 000	3, 500	3, 000	4, 000	3, 000	2, 500
U. S. S. R.:						
Asiatic	243, 000	356, 000	416, 000	(1)	(1)	(1)
European	22, 003, 000	25, 200, 000	28, 100, 000	(1)	(1)	(1)
United Kingdom	7, 241, 117	6, 907, 530	6, 629, 955	6, 437, 465	6, 378, 904	(1)
United States	51, 861, 930	47, 317, 405	49, 513, 463	47, 043, 119	41, 820, 115	46, 708, 319
World total	106, 767, 930	104, 089, 405	113, 843, 463	(1)	(1)	(1)
Total, exclusive of United States	54, 906, 000	56, 772, 000	64, 330, 000	(1)	(1)	(1)

[1] Data not available.
[2] Estimate included in total.
[3] The anthracite production of Japan is said to average about 225,000 tons a year. Production figures are not available

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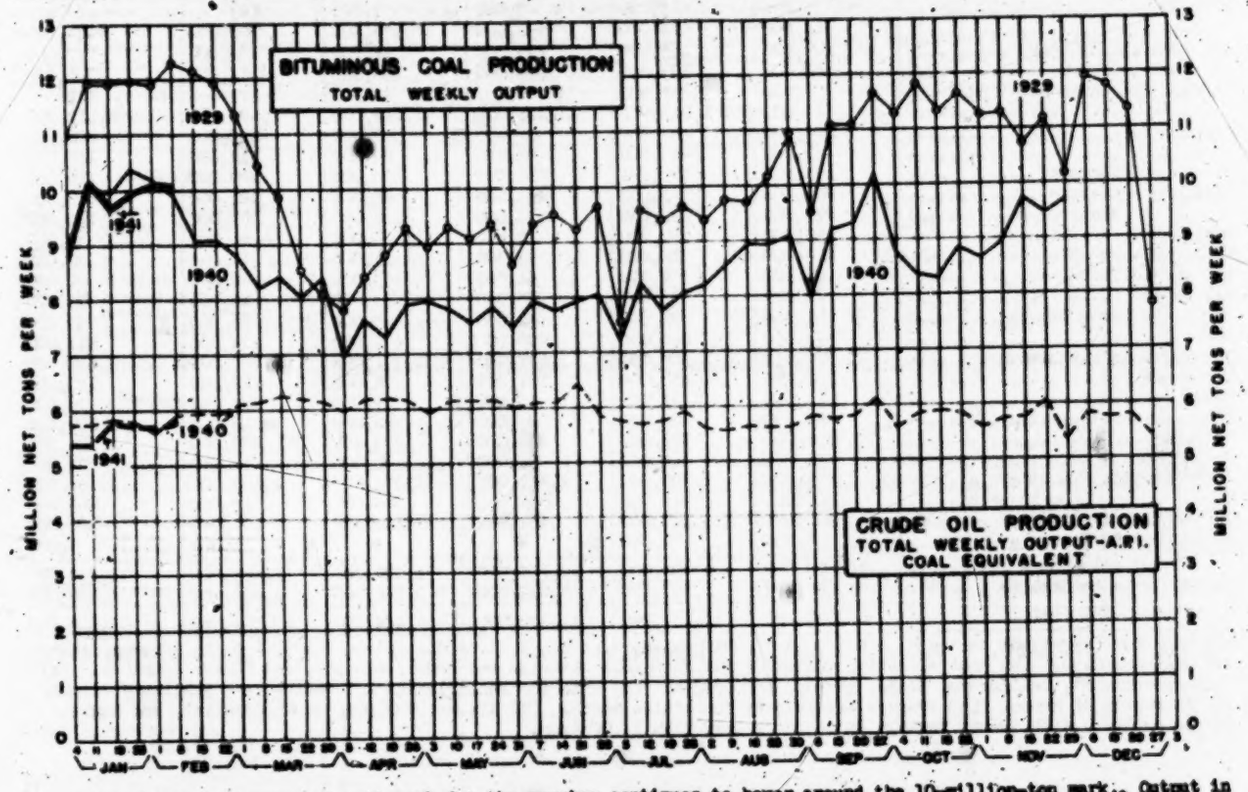
4903

WEEKLY COAL REPORT
NO. W. C. R. 1231

UNITED STATES
DEPARTMENT OF THE INTERIOR
BITUMINOUS COAL DIVISION

February 15, 1941

PRODUCTION, STOCKS, AND CONSUMPTION OF COAL



Total weekly production of soft coal for the country continues to hover around the 10-million-ton mark. Output in the week ended February 8 is estimated at 10,080,000 net tons, as against 10,100,000 tons in the preceding week and 9,931,000 tons in the corresponding week of 1940.

TABLE I. ESTIMATED UNITED STATES PRODUCTION OF COAL, IN NET TONS
WITH COMPARABLE DATA ON PRODUCTION OF CRUDE PETROLEUM

(Data for Pennsylvania anthracite from Weekly Anthracite and Beehive Coke Report of the Bureau of Mines; data for crude petroleum computed from weekly statistics of American Petroleum Institute)

	Week ended			Calendar year to date [d]			
	February 8, 1941	February 1, 1941	February 10 1940	1941 [e]	1940	Change from last year	1929
Bituminous coal [a]							
Total, including mine fuel ..	10,080,000	10,100,000	9,931,000	58,610,000	59,457,000	- 1.4%	69,983,000
Daily average	1,680,000	1,683,000	1,655,000	1,675,000	1,694,000	- 1.1%	1,976,000
Pennsylvania anthracite [b]							
Total, including mine fuel ..	-	1,190,000	636,000	f 5,504,000	f 6,045,000	- 8.9%	f 7,807,000
All coal							
Total, including mine fuel ..	-	11,290,000	10,567,000	f 54,034,000	f 55,571,000	- 2.8%	f 65,498,000
Crude petroleum [c]							
Coal equivalent of weekly output	5,795,000	5,791,000	5,908,000	33,880,000	34,620,000	- 2.1%	25,413,000

(a) Includes for purposes of historical comparison and statistical convenience the production of lignite. (b) Includes washery and dredge coal and coal shipped by truck from authorized operations. (c) Total barrels produced during the week converted to equivalent coal assuming 6,000,000 B.t.u. per barrel of oil and 13,100 B.t.u. per pound of coal. (d) Sum of 6 full weeks ending February 8, 1941, and corresponding periods in other years. (e) Subject to current adjustment. (f) Sum of 5 weeks.

The following record of daily loadings shows the variation in production from day to day in the week of February 3-8. The figures are furnished through courtesy of the Association of American Railroads, and are based on preliminary telegraphic returns. The revised totals, as reported at the end of the week, are given in Table III.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Bituminous coal, cars	27,852	28,974	29,692	29,737	29,793	15,195

No. W. C. R. 1231

TABLE II. ESTIMATED WEEKLY PRODUCTION OF COAL, BY STATES, IN NET TONS

(The current weekly estimates are based on railroad carloadings and river shipments and are subject to revision on receipt of monthly tonnage reports from district and State sources or of final annual returns from the operators.)

State	Week ended					January average 1923 a
	February 1, 1941	January 25, 1941	February 3, 1940	February 4, 1939	February 2, 1929	
Alaska	4,000	4,000	3,000	2,000	(f)	(f)
Alabama	344,000	340,000	336,000	278,000	369,000	434,000
Arkansas and Oklahoma	107,000	105,000	127,000	48,000	180,000	93,000
Colorado	160,000	175,000	206,000	148,000	310,000	226,000
Georgia and North Carolina	1,000	1,000	*	*	(f)	(f)
Illinois	1,183,000	1,215,000	1,421,000	1,216,000	1,674,000	2,111,000
Indiana	486,000	467,000	507,000	387,000	455,000	659,000
Iowa	61,000	67,000	88,000	89,000	112,000	140,000
Kansas and Missouri	175,000	173,000	216,000	165,000	199,000	190,000
Kentucky - Eastern	821,000	795,000	884,000	681,000	981,000	607,000
Western	225,000	217,000	308,000	217,000	799,000	240,000
Maryland	38,000	37,000	37,000	36,000	66,000	55,000
Michigan	6,000	10,000	12,000	11,000	17,000	32,000
Montana	68,000	69,000	64,000	63,000	90,000	82,000
New Mexico	25,000	25,000	25,000	33,000	62,000	73,000
North and South Dakota	61,000	73,000	52,000	65,000	f 63,000	f 50,000
Ohio	536,000	496,000	477,000	434,000	444,000	814,000
Pennsylvania bituminous	2,533,000	2,465,000	2,122,000	1,771,000	2,887,000	3,402,000
Tennessee	130,000	137,000	151,000	109,000	115,000	133,000
Texas	12,000	11,000	15,000	15,000	25,000	26,000
Utah	82,000	90,000	85,000	96,000	148,000	109,000
Virginia	334,000	333,000	336,000	270,000	273,000	211,000
Washington	43,000	42,000	34,000	36,000	64,000	74,000
West Virginia - Southern b	1,875,000	1,790,000	1,911,000	1,377,000	2,035,000	1,134,000
Northern c	667,000	644,000	657,000	560,000	745,000	762,000
Wyoming	122,000	117,000	134,000	113,000	171,000	186,000
Other Western States d	1,000	2,000	*	*	f 5,000	f 7,000
Total bituminous coal	10,100,000	9,900,000	10,208,000	8,220,000	11,889,000	11,850,000
Pennsylvania anthracite d	1,190,000	1,257,000	1,048,000	1,224,000	1,655,000	1,968,000
TOTAL, ALL COAL	11,290,000	11,157,000	11,256,000	9,444,000	13,544,000	13,818,000

(a) Includes operations on the N. & W.; C. & O.; Virginian; K. & M.; B. C. & G.; and on the B. & O. in Kanawha, Mason, and Clay counties. (b) Rest of State, including the Panhandle District and Grant, Mineral, and Tucker counties. (c) Includes Arizona, California, Idaho, Nevada, and Oregon. (d) Data for Pennsylvania anthracite from published records of the Bureau of Mines. (e) Average weekly rate for entire month. (f) Alaska, Georgia, North Carolina, and South Dakota included with "other Western States." * Less than 1,000 tons.

TABLE III. WEEKLY DISTRIBUTION STATISTICS

(See Monthly Coal Distribution Report for detailed monthly statistics)

	Week ended			Calendar year to date e		
	Feb. 8, 1941	Feb. 1, 1941	Feb. 10, 1940	1941	1940	1929
Carloadings, f.o.b. mines, cars a						
Bituminous	161,243	161,731	168,146	934,587	1,000,369	1,224,463
Anthracite	21,249	22,420	12,073	124,593	126,757	196,073
Unbilled loads, bituminous coal a						
Number of cars at mines or classification yards	Not yet available	24,348	19,776	f 24,348	19,776	18,473
Equivalent net tons		1,217,000	989,000	1,217,000	989,000	924,000
Hampton Roads loadings, net tons b						
Foreign cargo	14,609	22,792	52,961	210,848	307,089	165,667
Foreign bunker	6,708	7,738	9,830	47,793	95,510	193,894
New England cargo	243,458	259,995	311,046	1,567,757	1,699,083	1,614,873
New England bunker	4,471	5,087	5,302	32,556	31,790	44,869
Other coastwise	147,122	147,113	133,245	834,837	770,604	571,612
Inside Capes	4,415	4,321	2,874	22,846	17,565	24,910
Total loadings	420,783	447,046	515,258	2,716,637	2,921,641	2,615,825
New England all-rail, cars c						
Bituminous	Not yet available	2,491	2,465	f 12,117	14,865	17,821
Anthracite		2,419	1,851	f 10,519	13,476	16,807
Cincinnati gateway, cars interchanged d						
Bituminous	9,898	9,953	10,370	43,828	63,348	74,861

(a) Courtesy of Association of American Railroads. Figures of loadings f.o.b. mines include railroad fuel for company use, and therefore differ from the familiar statistics of revenue freight often quoted by the carriers. (b) N. & W.; C. & O. and Virginian railroads. (c) Association of American Railroads. A small part of this tonnage remains in New York State. (d) Cincinnati Superintendents Committee. Week closes at midnight, Thursday. (e) Approximate calendar year to date. (f) Accumulation to February 1.

TABLE IV. ESTIMATED PRODUCTION OF COAL, BY DISTRICTS, IN DECEMBER, WITH TOTAL OUTPUT FOR CALENDAR YEARS 1940, 1939, AND 1937, IN NET TONS

(Districts as defined in the Coal Act of 1937. Exclusive of wagon and truck mines producing less than 1000 tons a year)

(Figures are based principally upon the records of railroad carloadings and river shipments of coal and beehive coke, supplemented by direct reports from certain local sources, which are used in estimating State production. Allowance is made for commercial truck shipments, local sales, and colliery fuel, and for trucking mines producing over 1,000 tons a year.
These records are sufficient to permit estimating the total production of coal for the United States with a high degree of accuracy. To apportion the totals among the districts involves a larger measure of estimate and hence the district tonnages are subject to a larger measure of correction when final complete reports are received from all operators at the end of the year.)

Minimum Price Area and Producing District	December, 1940		November, 1940	December, 1939	Total calendar year		
	Net tons	Percent of total			1940	1939	1937
PRICE AREA 1							
Dist. 1. Eastern Pennsylvania a	3,965,000	9.58	3,820,000	3,817,000	42,048,000	36,423,000	41,106,000
Dist. 2. Western Pennsylvania	6,510,000	15.72	6,615,000	6,080,000	73,073,000	57,950,000	72,253,000
Dist. 3. Northern West Virginia	2,350,000	5.68	2,239,000	2,231,000	25,986,000	22,685,000	24,010,000
Dist. 4. Ohio	1,940,000	4.69	1,820,000	1,861,000	22,092,000	19,632,000	25,178,000
Dist. 5. Michigan	42,000	.10	42,000	52,000	440,000	434,000	562,000
Dist. 6. Panhandle	369,000	.89	353,000	373,000	4,398,000	3,842,000	4,203,000
Dist. 7. Southern Numbered 1	4,678,000	11.30	4,782,000	4,289,000	58,918,000	49,247,000	54,275,000
Dist. 8. Southern Numbered 2	7,380,000	17.82	7,647,000	7,107,000	93,920,000	83,699,000	91,876,000
Total, Price Area 1	27,234,000	65.78	27,318,000	25,810,000	322,875,000	273,872,000	313,463,000
PRICE AREA 2							
Dist. 9. West Kentucky	861,000	2.08	761,000	826,000	8,668,000	8,075,000	8,563,000
Dist. 10. Illinois	5,411,000	13.07	4,637,000	4,788,000	49,495,000	46,450,000	51,602,000
Dist. 11. Indiana	2,050,000	4.95	1,714,000	1,704,000	18,565,000	16,650,000	17,765,000
Dist. 12. Iowa	318,000	.77	292,000	312,000	2,908,000	3,050,000	3,637,000
Total, Price Area 2	8,640,000	20.87	7,404,000	7,630,000	79,636,000	74,225,000	81,567,000
PRICE AREA 3							
Dist. 13. Southeastern	1,462,000	3.53	1,339,000	1,386,000	16,215,000	13,050,000	13,459,000
PRICE AREA 4							
Dist. 14. Arkansas-Oklahoma	252,000	.61	241,000	171,000	2,064,000	1,418,000	1,967,000
PRICE AREA 5							
Dist. 15. Southwestern:							
Bituminous coal	937,000	2.27	794,000	774,000	7,854,000	7,102,000	8,172,000
Lignite (Texas)	38,000	.09	38,000	62,000	642,000	785,000	866,000
Total, Price Area 5	975,000	2.36	832,000	836,000	8,496,000	7,887,000	9,038,000
PRICE AREA 6							
Dist. 16. Northern Colorado	305,000	.73	290,000	258,000	2,245,000	2,174,000	2,510,000
Dist. 17. Southern Colorado b	550,000	1.33	526,000	453,000	4,830,000	4,352,000	5,515,000
Dist. 18. New Mexico c	57,000	.14	48,000	51,000	536,000	576,000	884,000
Total, Price Area 6	912,000	2.20	864,000	762,000	7,611,000	7,102,000	8,909,000
PRICE AREA 7							
Dist. 19. Wyoming d	650,000	1.57	642,000	470,000	5,748,000	5,384,000	5,918,000
Dist. 20. Utah	442,000	1.07	420,000	338,000	3,524,080	3,340,000	3,810,000
Total, Price Area 7	1,092,000	2.64	1,062,000	808,000	9,272,000	8,724,000	9,728,000
PRICE AREA 8							
Dist. 21. North-South Dakota	291,000	.71	400,000	225,000	2,256,000	2,139,000	2,398,000
PRICE AREA 9							
Dist. 22. Montana	331,000	.80	347,000	278,000	2,974,000	2,810,000	2,965,000
PRICE AREA 10							
Dist. 23. Washington e	189,000	.46	187,000	149,000	1,696,000	1,692,000	2,007,000
Alaska	18,000	.04	18,000	11,000	150,000	146,000	132,000
Total, Price Area 10	207,000	.50	205,000	160,000	1,846,000	1,838,000	2,139,000
GRAND TOTAL, AREAS LISTED ABOVE f	41,400,000	100.00	40,012,000	38,066,000	453,245,000	393,065,000	445,531,000

(a) Includes Maryland and Grant, Mineral, and Tucker counties, West Virginia. (b) Includes Colfax County, New Mexico. (c) Includes Arizona and California, but excludes Colfax County. (d) Includes Idaho. (e) Includes Oregon. (f) For historical comparison and statistical convenience, the figures include the output of lignite. Note that no district organization has been created for District 21, North and South Dakota, the output of which is usually classified in the coal trade as lignite.

TABLE V. ESTIMATED PRODUCTION OF COAL, BY STATES, IN DECEMBER, WITH TOTAL OUTPUT FOR CALENDAR YEARS 1940, 1939, AND 1937, IN NET TONS

(Figures are preliminary estimates based on railroad carloadings and river shipments of coal and beehive coke, supplemented by direct reports from a number of mining companies, local coal operators' associations, and detailed monthly production statistics compiled by the State Mine Departments of Colorado, Illinois, Pennsylvania, Washington, and West Virginia. In making the estimates, allowance is made for commercial truck shipments, local sales, and colliery fuel, and for small trucking mines producing over 1,000 tons a year.

The estimates here given are based upon the latest information available, and differ in some cases from the current figures previously published in the Weekly Coal Report.)

	December, 1940		November, 1940	December, 1939	Total calendar year		
	Net tons	Percent of total			1940	1939	1937
Alaska	18,000	.04	18,000	11,000	150,000	146,000	132,000
Alabama	1,363,000	3.29	1,245,000	1,298,000	15,150,000	11,995,000	12,440,000
Arkansas and Oklahoma	403,000	.97	375,000	262,000	3,163,000	2,300,000	3,111,000
Colorado	797,000	1.93	767,000	654,000	6,516,000	5,890,000	7,187,000
Georgia and North Carolina	3,000	.01	2,000	2,000	29,000	25,000	11,000
Illinois	5,411,000	13.07	4,637,000	4,788,000	49,495,000	46,450,000	51,602,000
Indiana	2,050,000	4.95	1,714,000	1,704,000	18,565,000	16,650,000	17,765,000
Iowa	318,000	.77	292,000	312,000	2,908,000	3,050,000	3,637,000
Kansas and Missouri	784,000	1.90	658,000	680,000	6,736,000	6,195,000	6,984,000
Kentucky:							
Eastern	3,062,000	7.39	3,150,000	2,850,000	39,732,000	34,730,000	38,323,000
Western	861,000	2.08	761,000	826,000	8,668,000	8,075,000	8,563,000
Maryland	145,000	.35	127,000	158,000	1,478,000	1,468,000	1,549,000
Michigan	42,000	.10	42,000	52,000	440,000	434,000	562,000
Montana	331,000	.80	347,000	278,000	2,974,000	2,810,000	2,965,000
New Mexico	113,000	.27	95,000	107,000	1,081,000	1,206,000	1,715,000
North and South Dakota	295,000	.71	400,000	225,000	2,256,000	2,139,000	2,298,000
Ohio	1,940,000	4.69	1,820,000	1,861,000	22,042,000	19,632,000	25,178,000
Pennsylvania bituminous	10,263,000	24.79	10,240,000	9,668,000	112,907,000	92,190,000	111,002,000
Tennessee	515,000	1.24	465,000	485,000	6,010,000	5,280,000	5,213,000
Texas	40,000	.10	40,000	65,000	661,000	810,000	910,000
Utah	442,000	1.07	420,000	338,000	3,524,000	3,340,000	3,810,000
Virginia	1,220,000	2.95	1,195,000	1,154,000	14,950,000	13,230,000	13,795,000
Washington	186,000	.45	185,000	148,000	1,688,000	1,690,000	2,002,000
West Virginia:							
Southern a	7,357,000	17.77	7,711,000	6,993,000	93,182,000	80,696,000	89,625,000
Northern b	2,786,000	6.73	2,660,000	2,675,000	31,120,000	27,242,000	29,021,000
Wyoming	650,000	1.57	642,000	470,000	5,748,000	5,383,000	5,918,000
Other Western States c	5,000	.01	4,000	2,000	22,000	9,000	13,000
Total bituminous	41,400,000	100.00	40,012,000	38,066,000	453,245,000	393,065,000	445,531,000
Pennsylvania anthracite d.	4,699,000	—	3,869,000	3,914,000	50,052,000	51,487,000	51,857,000
TOTAL, ALL COAL	46,099,000	—	43,881,000	41,980,000	503,297,000	444,552,000	497,388,000

(a) Includes operations on the N. & W.; C. & O.; Virginian; K. & M.; B. C. & G.; and on the B. & O. in Kanawha, Mason, and Clay counties. (b) Rest of State, including the Panhandle District and Grant, Mineral, and Tucker counties. (c) Includes Arizona, California, Idaho, Nevada, and Oregon. (d) Data for Pennsylvania anthracite from published records of the Bureau of Mines.

By R. McKinney and R. L. Anderson,
W. H. Young, Chief, Research Section,
G. A. Lamb, Chief, Economics Branch.

Bituminous Coal Division,
February 15, 1941.

TABLE VI. - PRODUCTION OF BITUMINOUS COAL, BY DISTRICTS, FOR THE YEARS 1923 TO 1940, INCLUSIVE, IN NET TONS 1/

(Districts as defined in the Bituminous Coal Act of 1937. Exclusive of product of wagon mines producing less than 1,000 tons)

Minimum Price Area and Producing District	1923	1924	1925	1926	1927	1928	1929
PRICE AREA 1							
Dist. 1. Eastern Pennsylvania ..	63,426,630	51,825,979	53,914,270	61,298,928	54,382,351	51,022,203	53,975,512
Dist. 2. Western Pennsylvania ..	110,231,704	81,947,040	85,168,699	96,364,435	82,908,003	84,130,243	93,613,841
Dist. 3. Northern West Virginia.	31,041,766	22,222,639	24,667,406	34,521,654	33,723,370	30,897,635	30,210,063
Dist. 4. Ohio	40,546,443	30,473,007	28,034,112	37,872,488	15,799,897	19,441,225	23,689,477
Dist. 5. Michigan	1,172,075	831,020	808,233	686,707	736,763	617,342	804,869
Dist. 6. Panhandle	6,205,749	5,406,211	5,892,043	6,304,585	7,137,287	7,211,624	6,334,637
Dist. 7. Southern Numbered 1 ...	38,440,986	40,528,849	47,960,201	54,997,206	52,588,605	52,226,558	58,118,730
Dist. 8. Southern Numbered 2 ...	80,668,418	82,997,978	100,394,421	112,292,354	113,641,978	103,279,890	105,422,812
Total, Price Area 1	373,753,771	316,232,673	350,839,547	394,338,359	362,938,034	345,036,720	372,169,941
PRICE AREA 2							
Dist. 9. West Kentucky	10,916,240	9,020,071	12,186,557	15,464,023	21,204,590	16,277,216	14,437,148
Dist. 10. Illinois	79,310,075	68,323,281	66,909,359	69,366,923	46,848,224	55,948,199	60,657,641
Dist. 11. Indiana	36,229,099	21,480,213	21,224,966	23,186,006	17,935,758	16,378,580	18,344,358
Dist. 12. Iowa	5,710,735	5,468,450	4,714,843	4,625,487	2,949,622	3,683,635	4,241,069
Total, Price Area 2	122,166,149	104,292,015	105,035,725	112,642,439	88,938,194	92,287,630	97,680,216
PRICE AREA 3							
Dist. 13. Southeastern	22,262,803	20,141,104	21,277,637	22,351,503	21,035,126	18,898,815	19,228,576
PRICE AREA 4							
Dist. 14. Arkansas-Oklahoma	1,647,933	1,687,489	1,600,136	1,972,835	2,155,923	2,378,587	2,529,269
PRICE AREA 5							
Dist. 15. Southwestern:							
Bituminous coal	10,555,628	8,985,838	9,346,889	9,924,324	9,875,969	9,443,705	10,055,807
Lignite (Texas)	1,011,997	983,815	825,695	920,664	1,169,186	1,064,185	991,062
Total, Price Area 5	11,567,626	9,969,653	10,172,584	10,844,988	11,045,155	10,507,890	11,046,869
PRICE AREA 6							
Dist. 16. Northern Colorado	2,780,226	2,889,803	2,707,311	2,949,403	2,441,147	2,896,369	3,193,506
Dist. 17. Southern Colorado	9,372,403	9,198,906	9,111,363	9,436,443	9,133,290	8,614,687	8,179,095
Dist. 18. New Mexico	1,109,272	1,142,877	1,049,823	1,070,976	1,090,051	1,052,734	1,181,504
Total, Price Area 6	13,261,901	13,231,586	12,868,527	13,456,822	12,664,488	12,563,790	12,554,105
PRICE AREA 7							
Dist. 19. Wyoming	7,575,966	6,764,218	6,554,732	6,519,488	6,771,259	6,587,683	6,708,990
Dist. 20. Utah	4,720,217	4,488,157	4,690,342	4,373,793	4,781,480	4,842,544	5,160,521
Total, Price Area 7	12,296,183	11,252,375	11,245,074	10,893,281	11,552,739	11,430,227	11,869,511
PRICE AREA 8							
Dist. 21. North-South Dakota	1,395,779	1,212,570	1,339,067	1,384,672	1,540,446	1,663,859	1,874,984
PRICE AREA 9							
Dist. 22. Montana	3,147,678	2,905,365	3,043,686	2,797,760	3,143,638	3,324,195	3,407,526
PRICE AREA 10							
Dist. 23. Washington	2,945,013	2,662,045	2,547,890	2,597,026	2,643,009	2,527,157	2,526,986
Alaska	119,826	99,663	82,848	87,300	104,300	126,100	100,610
Total, Price Area 10	3,064,839	2,761,708	2,630,738	2,684,326	2,749,309	2,653,257	2,627,596
GRAND TOTAL, AREAS LISTED ABOVE .	564,564,662	483,686,538	520,052,741	573,366,985	517,763,352	500,744,970	534,988,593

1/ For purposes of historical comparison and statistical convenience, the figures include the output of lignite and of anthracite and semi-anthracite outside of Pennsylvania.

TABLE VI. - PRODUCTION OF BITUMINOUS COAL, BY DISTRICTS, FOR THE YEARS 1923 TO 1940, INCLUSIVE, IN NET TONS (Continued) 1/

(Districts as defined in the Bituminous Coal Act of 1937. Exclusive of product of wagon mines producing less than 1,000 tons)

Minimum Price Area and Producing District	1930	1931	1932	1933	1934	1935	1936
PRICE AREA 1							
Dist. 1. Eastern Pennsylvania ..	48,364,733	42,248,549	33,582,493	35,494,008	38,220,386	37,070,456	40,334,442
Dist. 2. Western Pennsylvania ..	79,405,084	58,362,910	43,367,711	46,099,490	54,078,227	56,851,598	72,147,640
Dist. 3. Northern West Virginia.	25,751,724	20,818,854	16,773,001	18,987,459	19,227,788	19,027,614	22,791,420
Dist. 4. Ohio	22,551,978	20,410,995	13,909,451	19,588,763	20,690,564	21,153,151	24,110,078
Dist. 5. Michigan	661,113	359,403	446,149	406,584	621,741	628,384	626,145
Dist. 6. Panhandle	5,114,290	4,054,110	3,645,434	4,096,433	4,041,261	3,846,523	4,360,334
Dist. 7. Southern Numbered 1 ...	51,574,158	43,917,309	37,142,035	41,963,760	44,696,864	45,563,461	54,037,429
Dist. 8. Southern Numbered 2 ...	93,045,272	76,364,304	63,473,845	67,821,692	72,283,099	75,393,533	90,860,655
Total, Price Area 1	326,668,352	266,736,434	212,340,109	234,418,189	253,779,930	259,534,720	309,268,143
PRICE AREA 2							
Dist. 9. West Kentucky	10,915,301	8,579,500	9,540,048	7,834,397	8,214,779	8,134,122	8,370,364
Dist. 10. Illinois	53,731,230	44,303,395	33,474,553	37,413,145	41,272,384	44,525,469	50,926,599
Dist. 11. Indiana	16,489,962	14,295,365	13,329,573	13,761,052	14,793,643	15,734,214	17,822,536
Dist. 12. Iowa	3,892,571	3,388,355	3,862,435	3,194,983	3,366,992	3,690,163	3,960,700
Total, Price Area 2	85,039,064	70,566,315	60,200,609	62,203,577	67,647,798	72,063,968	81,080,199
PRICE AREA 3							
Dist. 13. Southeastern	16,687,906	12,998,680	8,704,668	9,769,505	10,120,655	9,467,486	13,159,837
PRICE AREA 4							
Dist. 14. Arkansas-Oklahoma	2,132,056	1,672,711	1,444,801	1,313,462	1,307,383	1,584,137	2,110,140
PRICE AREA 5							
Dist. 15. Southwestern:							
Bituminous coal	8,562,733	7,057,012	6,889,561	6,480,331	6,649,018	7,146,671	8,022,275
Lignite (Texas)	749,550	655,613	613,648	799,087	728,146	721,558	802,326
Total, Price Area 5	9,312,283	7,712,625	7,503,209	7,279,418	7,377,164	7,868,229	8,824,601
PRICE AREA 6							
Dist. 16. Northern Colorado	2,839,361	2,727,459	2,547,793	2,407,606	2,306,454	2,380,017	2,476,586
Dist. 17. Southern Colorado	6,390,212	4,644,661	3,677,151	3,443,609	3,586,032	4,241,409	5,146,414
Dist. 18. New Mexico	998,739	804,945	653,604	617,545	609,376	693,551	791,742
Total, Price Area 6	10,188,312	8,177,065	6,878,548	6,468,760	6,501,862	7,314,977	8,414,742
PRICE AREA 7							
Dist. 19. Wyoming	6,089,401	4,996,420	4,176,767	4,016,915	4,373,425	5,181,014	5,783,545
Dist. 20. Utah	4,257,541	3,350,044	2,852,127	2,674,986	2,406,183	2,946,918	3,246,565
Total, Price Area 7	10,346,942	8,346,464	7,028,894	6,691,901	6,779,608	8,127,932	9,030,110
PRICE AREA 8							
Dist. 21. North-South Dakota	1,712,967	1,546,792	1,788,732	1,841,647	1,796,395	1,968,753	2,256,666
PRICE AREA 9							
Dist. 22. Montana	3,022,004	2,378,052	2,125,225	2,152,207	2,565,702	2,758,906	2,988,524
PRICE AREA 10							
Dist. 23. Washington	2,306,313	1,848,358	1,592,377	1,395,400	1,384,117	1,564,589	1,818,348
Alaska	120,100	105,900	102,700	96,467	107,508	119,425	136,593
Total, Price Area 10	2,426,413	1,954,258	1,695,077	1,491,867	1,491,625	1,684,014	1,954,941
GRAND TOTAL, AREAS LISTED ABOVE .	467,526,299	382,089,396	309,709,872	333,630,533	359,368,022	372,373,122	439,087,903

1/ For purposes of historical comparison and statistical convenience, the figures include the output of lignite and of anthracite and semi-anthracite outside of Pennsylvania.

TABLE VI. - PRODUCTION OF BITUMINOUS COAL, BY DISTRICTS, FOR THE YEARS 1923 TO 1940, INCLUSIVE, IN NET TONS (Continued) 1/

(Districts as defined in the Bituminous Coal Act of 1937. Exclusive of product of wagon mines producing less than 1,000 tons)

Minimum Price Area and Producing District	1937	1938	1939 (Preliminary)	1940 (Preliminary) Jan.-Dec. inclusive	1940 (Preliminary) Jan.-Sept. inclusive	1940 (Preliminary) Oct.-Dec. inclusive
PRICE AREA 1						
Dist. 1. Eastern Pennsylvania	41,106,187	33,248,510	36,423,000	42,048,000	30,340,000	11,708,000
Dist. 2. Western Pennsylvania	72,253,305	46,394,198	57,950,000	73,073,000	52,903,000	20,170,000
Dist. 3. Northern West Virginia	24,009,718	19,073,258	22,685,000	25,986,000	19,438,000	6,548,000
Dist. 4. Ohio	25,177,857	18,590,618	19,632,000	22,092,000	16,682,000	5,410,000
Dist. 5. Michigan	562,263	494,481	434,000	440,000	313,000	127,000
Dist. 6. Panhandle	4,203,108	3,136,724	3,842,000	4,398,000	3,300,000	1,098,000
Dist. 7. Southern Numbered 1	54,275,261	43,029,607	49,247,000	58,918,000	44,452,000	14,466,000
Dist. 8. Southern Numbered 2	91,874,221	74,486,913	83,699,000	95,928,000	73,153,000	22,767,000
Total, Price Area 1	313,461,929	238,454,309	273,872,000	322,875,000	240,581,000	82,294,000
PRICE AREA 2						
Dist. 9. West Kentucky	8,562,890	7,367,746	8,075,000	8,668,000	6,411,000	2,257,000
Dist. 10. Illinois	51,601,638	41,912,085	46,450,000	49,495,000	35,370,000	14,125,000
Dist. 11. Indiana	17,764,774	14,758,484	16,650,000	18,565,000	13,361,000	5,204,000
Dist. 12. Iowa	3,637,054	3,103,187	3,050,000	2,908,000	2,063,000	845,000
Total, Price Area 2	81,566,356	67,141,502	74,225,000	79,636,000	57,205,000	22,431,000
PRICE AREA 3						
Dist. 13. Southeastern	13,458,603	11,924,952	13,050,000	16,215,000	11,999,000	4,216,000
PRICE AREA 4						
Dist. 14. Arkansas-Oklahoma	1,967,452	1,538,577	1,418,000	2,064,000	1,388,000	676,000
PRICE AREA 5						
Dist. 15. Southwestern:						
Bituminous coal	8,171,610	7,025,927	7,102,000	7,854,000	5,482,000	2,372,000
Lignite (Texas)	866,292	846,219	785,000	642,000	527,000	115,000
Total, Price Area 5	9,037,902	7,872,146	7,887,000	8,496,000	6,009,000	2,487,000
PRICE AREA 6						
Dist. 16. Northern Colorado	2,509,984	2,266,152	2,174,000	2,245,000	1,433,000	812,000
Dist. 17. Southern Colorado	5,514,757	4,033,522	4,352,000	4,830,000	3,371,000	1,459,000
Dist. 18. New Mexico	884,344	608,348	576,000	536,000	386,000	150,000
Total, Price Area 6	8,909,085	6,908,022	7,102,000	7,611,000	5,190,000	2,421,000
PRICE AREA 7						
Dist. 19. Wyoming	5,918,460	5,205,115	5,384,000	5,748,000	3,892,000	1,856,000
Dist. 20. Utah	3,809,476	2,946,951	3,340,000	3,524,000	2,322,000	1,202,000
Total, Price Area 7	9,727,936	8,152,066	8,724,000	9,272,000	6,214,000	3,058,000
PRICE AREA 8						
Dist. 21. North-South Dakota	2,297,816	2,098,157	2,139,000	2,256,000	1,273,000	983,000
PRICE AREA 9						
Dist. 22. Montana	2,965,193	2,732,050	2,810,000	2,974,000	1,998,000	976,000
PRICE AREA 10						
Dist. 23. Washington	2,007,520	1,568,301	1,692,000	1,696,000	1,172,000	524,000
Alaska	131,657	154,682	146,000	150,000	104,000	46,000
Total, Price Area 10	2,139,177	1,722,983	1,838,000	1,846,000	1,276,000	570,000
GRAND TOTAL, AREAS LISTED ABOVE	445,331,449	348,544,764	393,065,000	453,245,000	333,133,000	120,112,000

1/ For purposes of historical comparison and statistical convenience, the figures include the output of lignite and of anthracite and semianthracite outside of Pennsylvania

By M. E. McMillan, R. McKinney, and R. L. Anderson,
W. H. Young, Chief, Research Section,
O. A. Lamb, Chief, Economics Branch.

Bituminous Coal Division,
February 15, 1941.

TABLE VII. - PERCENTAGE OF BITUMINOUS COAL PRODUCED, BY DISTRICTS, FOR THE YEARS 1923 TO 1940, INCLUSIVE

Minimum Price Area and Producing District	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
PRICE AREA 1										
Dist. 1. Eastern Pennsylvania	11.59	10.72	10.75	10.69	10.50	10.19	10.09	10.39	11.06	10.84
Dist. 2. Western Pennsylvania	19.53	16.94	16.38	16.81	16.01	16.80	17.50	16.99	15.28	14.00
Dist. 3. Northern West Virginia	5.49	4.59	5.13	6.02	6.90	6.17	5.65	5.51	5.45	5.42
Dist. 4. Ohio	7.18	6.30	5.39	4.86	3.05	3.12	4.43	4.82	5.34	4.49
Dist. 5. Michigan	.21	.17	.16	.12	.15	.12	.15	.14	.09	.14
Dist. 6. Panhandle	1.10	1.12	1.13	1.10	1.38	1.44	1.18	1.09	1.06	1.18
Dist. 7. Southern Numbered 1	6.81	8.38	9.22	9.59	10.16	10.43	10.86	11.03	11.49	11.99
Dist. 8. Southern Numbered 2	14.29	17.16	19.30	19.58	21.95	20.63	19.71	19.90	20.04	20.50
Total, Price Area 1	66.20	65.38	67.46	68.77	70.10	68.90	69.57	69.87	69.81	68.56
PRICE AREA 2										
Dist. 9. West Kentucky	1.93	1.86	2.34	2.70	4.10	3.25	2.70	2.34	2.25	3.08
Dist. 10. Illinois	14.08	14.13	12.87	12.10	9.05	11.17	11.34	11.49	11.59	10.81
Dist. 11. Indiana	4.65	4.44	4.08	4.04	3.46	3.27	3.43	3.53	3.74	4.30
Dist. 12. Iowa	1.01	1.13	.91	.81	.57	.74	.79	.83	.89	1.25
Total, Price Area 2	21.64	21.56	20.20	19.65	17.18	18.43	18.26	18.19	18.47	19.44
PRICE AREA 3										
Dist. 13. Southeastern	3.94	4.16	4.09	3.90	4.06	3.78	3.59	3.57	3.40	2.81
PRICE AREA 4										
Dist. 14. Arkansas-Oklahoma	.29	.35	.31	.34	.42	.48	.47	.46	.44	.47
PRICE AREA 5										
Dist. 15. Southwestern:										
Bituminous coal	1.87	1.86	1.80	1.73	1.91	1.89	1.88	1.83	1.85	2.22
Lignite (Texas)	.18	.20	.16	.16	.22	.21	.18	.16	.17	.20
Total, Price Area 5	2.05	2.06	1.96	1.89	2.13	2.10	2.06	1.99	2.02	2.42
PRICE AREA 6										
Dist. 16. Northern Colorado	.49	.60	.52	.51	.47	.58	.60	.61	.71	.82
Dist. 17. Southern Colorado	1.66	1.90	1.75	1.65	1.76	1.72	1.53	1.36	1.22	1.19
Dist. 18. New Mexico	.20	.24	.20	.19	.21	.21	.22	.21	.21	.21
Total, Price Area 6	2.35	2.74	2.47	2.35	2.44	2.51	2.35	2.18	2.14	2.22
PRICE AREA 7										
Dist. 19. Wyoming	1.34	1.40	1.26	1.14	1.31	1.31	1.25	1.30	1.31	1.35
Dist. 20. Utah	.84	.93	.90	.76	.92	.97	.97	.91	.87	.92
Total, Price Area 7	2.18	2.33	2.16	1.90	2.23	2.28	2.22	2.21	2.18	2.27
PRICE AREA 8										
Dist. 21. North-South Dakota	.25	.25	.26	.24	.30	.33	.35	.37	.41	.58
PRICE AREA 9										
Dist. 22. Montana	.56	.60	.58	.49	.61	.66	.64	.64	.62	.69
PRICE AREA 10										
Dist. 23. Washington	.52	.55	.49	.45	.51	.50	.47	.49	.48	.51
Alaska	.02	.02	.02	.02	.02	.03	.02	.03	.03	.03
Total, Price Area 10	.54	.57	.51	.47	.53	.53	.49	.52	.51	.54
GRAND TOTAL, AREAS LISTED ABOVE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

TABLE VII. - PERCENTAGE OF BITUMINOUS COAL PRODUCED, BY DISTRICTS, FOR THE YEARS 1923 TO 1940, INCLUSIVE (Continued)

Minimum Price Area and Producing District	1933	1934	1935	1936	1937	1938	1939 (Prel.)	1940 (Preliminary) 1/ Jan.-Dec. inclusive	Jan.-Sept. inclusive	Oct.-Dec. inclusive
PRICE AREA 1										
Dist. 1. Eastern Pennsylvania	10.64	10.64	9.96	9.18	9.23	9.54	9.27	9.28	9.11	9.75
Dist. 2. Western Pennsylvania	13.80	15.05	15.27	16.43	16.22	13.31	14.74	16.12	15.88	16.79
Dist. 3. Northern West Virginia	5.69	5.35	5.11	5.39	5.39	5.47	5.77	5.73	5.83	5.45
Dist. 4. Ohio	5.87	5.76	5.68	5.89	5.69	5.34	5.00	4.87	5.01	4.50
Dist. 5. Michigan	.12	.17	.17	.14	.13	.14	.11	.10	.09	.10
Dist. 6. Panhandle	1.23	1.12	1.03	.99	.94	.90	.98	.97	.99	.91
Dist. 7. Southern Numbered 1	12.58	12.44	12.23	12.31	12.18	12.35	12.53	13.00	13.35	12.05
Dist. 8. Southern Numbered 2	20.33	20.09	20.25	20.70	20.62	21.37	21.28	21.16	21.96	18.96
Total, Price Area 1	70.26	70.62	69.70	70.43	70.36	68.42	69.68	71.23	72.22	68.51
PRICE AREA 2										
Dist. 9. West Kentucky	2.35	2.38	2.18	1.91	1.92	2.11	2.05	1.91	1.92	1.88
Dist. 10. Illinois	11.21	11.48	11.96	11.60	11.58	12.03	11.82	10.92	10.62	11.76
Dist. 11. Indiana	4.13	4.12	4.25	4.06	3.99	4.23	4.24	4.10	4.01	4.33
Dist. 12. Iowa	.96	.94	.98	.90	.82	.89	.77	.64	.62	.70
Total, Price Area 2	18.65	18.82	19.35	18.47	18.31	19.26	18.88	17.57	17.17	18.67
PRICE AREA 3										
Dist. 13. Southeastern	2.93	2.82	2.54	3.00	3.02	3.42	3.32	3.58	3.60	3.51
PRICE AREA 4										
Dist. 14. Arkansas-Oklahoma	.39	.36	.43	.48	.44	.44	.36	.45	.42	.56
PRICE AREA 5										
Dist. 15. Southwestern:										
Bituminous coal	1.94	1.85	1.92	1.83	1.83	2.02	1.81	1.73	1.64	1.97
Lignite (Texas)	.24	.20	.19	.18	.20	.24	.20	.14	.16	.10
Total, Price Area 5	2.18	2.05	2.11	2.01	2.03	2.26	2.01	1.87	1.80	2.07
PRICE AREA 6										
Dist. 16. Northern Colorado	.72	.64	.64	.57	.56	.65	.55	.49	.43	.68
Dist. 17. Southern Colorado	1.03	1.00	1.14	1.17	1.24	1.16	1.11	1.07	1.01	1.21
Dist. 18. New Mexico	.19	.17	.19	.18	.20	.17	.15	.12	.12	.13
Total, Price Area 6	1.94	1.81	1.97	1.92	2.00	1.98	1.81	1.68	1.56	2.02
PRICE AREA 7										
Dist. 19. Wyoming	1.20	1.22	1.39	1.32	1.33	1.49	1.37	1.27	1.17	1.55
Dist. 20. Utah	.80	.67	.79	.74	.85	.85	.85	.78	.70	1.00
Total, Price Area 7	2.00	1.89	2.18	2.06	2.18	2.34	2.22	2.05	1.87	2.55
PRICE AREA 8										
Dist. 21. North-South Dakota	.55	.50	.53	.51	.52	.60	.54	.50	.38	.82
PRICE AREA 9										
Dist. 22. Montana	.65	.71	.74	.68	.66	.78	.71	.66	.60	.81
PRICE AREA 10										
Dist. 23. Washington	.42	.39	.42	.41	.45	.45	.43	.38	.35	.44
Alaska	.03	.03	.03	.03	.03	.05	.04	.03	.03	.04
Total, Price Area 10	.45	.42	.45	.44	.48	.50	.47	.41	.38	.48
GRAND TOTAL, AREAS LISTED ABOVE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Figures covering the 9 months and the 3 months are not adjusted for seasonal variation. They are not directly comparable, therefore, with the annual percentages shown in the other columns.

By M. E. McMillan, E. McKinney, and R. L. Anderson,
W. H. Young, Chief, Research Section,
G. A. Lamb, Chief, Economics Branch.

Bituminous Coal Division,
February 15, 1941.

PERCENTAGE OF BITUMINOUS COAL PRODUCED IN THE PRINCIPAL COAL ACT DISTRICTS 1923 TO 1940, INCLUSIVE

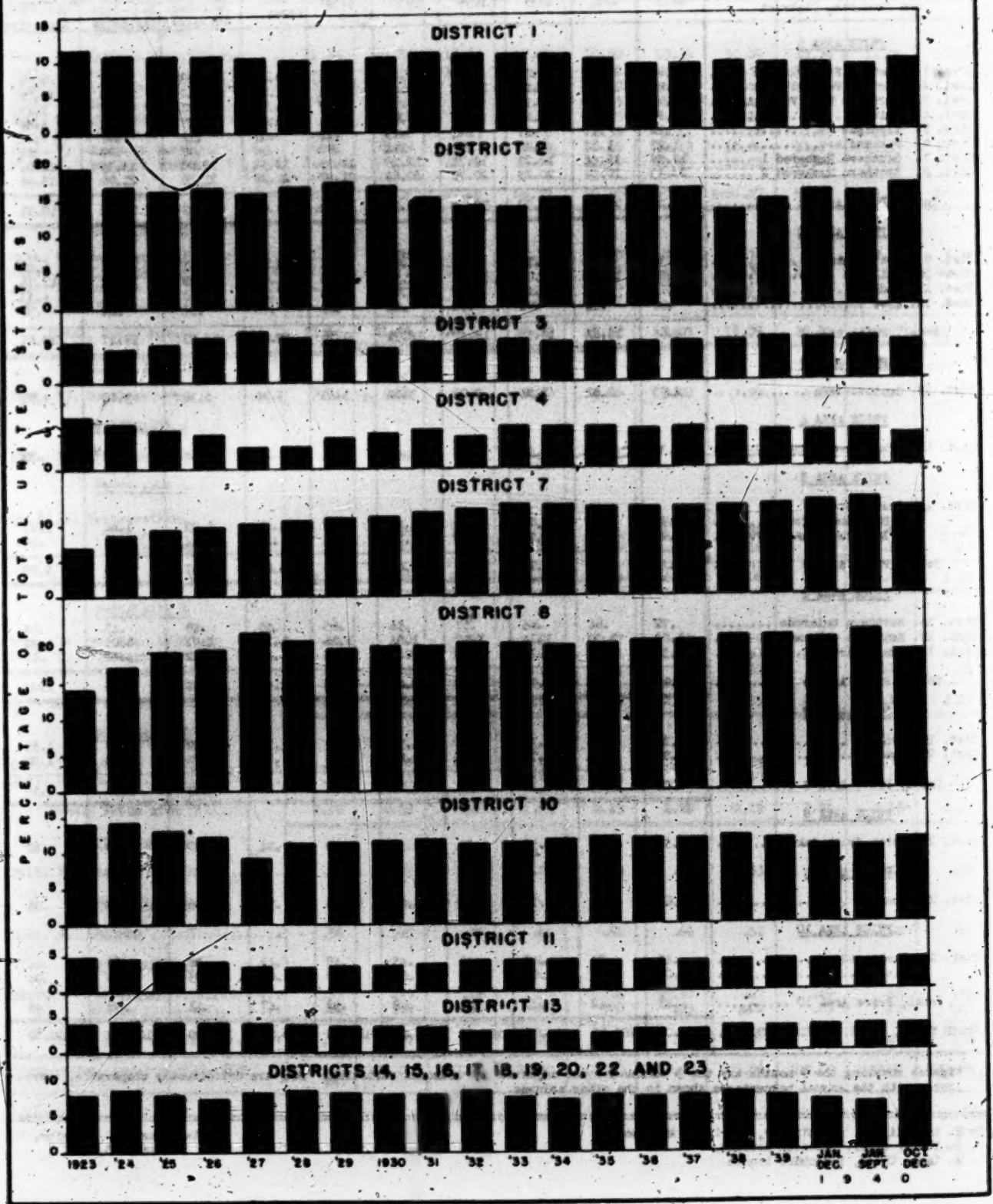


TABLE VIII. - PRODUCTION OF BITUMINOUS COAL, BY STATES, FOR THE YEARS 1923 TO 1940, INCLUSIVE, IN NET TONS 1/

(Exclusive of product of wagon mines producing less than 1,000 tons)

State	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Alaska	119,826	99,663	82,868	87,300	104,300	126,100	100,610	120,100	105,900	102,700
Alabama	20,457,649	19,130,184	20,004,395	21,000,962	19,765,866	17,621,362	17,943,923	15,570,058	11,998,781	7,856,939
Arkansas	1,296,892	1,451,503	1,220,099	1,459,017	1,548,834	1,660,973	1,695,108	1,533,434	1,153,555	1,033,471
Colorado	10,346,218	10,444,098	10,310,551	10,637,225	9,724,075	9,847,707	9,920,741	8,196,910	6,604,369	5,598,721
Georgia and North Carolina	111,639	132,041	131,327	117,808	130,089	119,250	96,816	35,592	23,943	29,108
Illinois	79,310,075	68,323,281	66,909,359	69,366,923	46,848,224	55,948,199	60,657,641	53,731,230	44,303,295	33,474,553
Indiana	26,229,099	21,480,213	21,224,966	23,186,006	17,935,758	16,378,580	18,344,358	16,489,962	14,295,165	13,323,573
Iowa	5,710,735	5,468,450	4,714,843	4,625,487	2,949,622	3,683,635	4,241,069	3,892,571	3,388,355	3,862,435
Kansas	4,443,149	4,247,733	4,524,251	4,416,480	3,443,762	2,809,724	2,975,971	2,429,929	1,986,870	1,952,885
Kentucky: Eastern	33,861,077	36,127,133	42,882,113	47,460,439	47,919,408	45,583,163	46,025,452	40,293,694	31,384,121	25,799,534
Western	10,916,240	9,020,071	12,186,557	15,464,023	21,204,590	16,277,216	14,437,148	10,915,301	8,579,500	9,540,048
Maryland	2,285,926	2,133,703	2,694,572	3,078,353	2,814,842	2,686,979	2,649,114	2,270,393	2,005,773	1,428,937
Michigan	1,172,075	831,020	808,233	686,707	756,763	617,342	804,869	661,113	399,403	446,149
Missouri	3,403,151	2,480,880	2,694,215	3,008,495	3,064,343	3,732,421	4,030,311	3,853,150	3,620,497	4,069,598
Montana	3,147,678	2,905,365	3,043,686	2,797,760	3,143,638	3,324,195	3,407,526	3,022,004	2,378,052	2,125,225
New Mexico	2,915,173	2,786,063	2,556,851	2,817,923	2,935,539	2,711,851	2,622,769	1,969,433	1,552,822	1,263,386
North Dakota	1,385,400	1,200,527	1,324,620	1,370,244	1,527,939	1,649,930	1,862,130	1,700,157	1,519,307	1,739,658
South Dakota	10,379	12,043	14,447	14,428	12,507	13,929	12,854	12,810	27,485	49,074
Ohio	40,546,443	30,473,007	28,034,112	27,872,488	15,799,697	15,641,225	23,689,477	22,551,978	20,410,995	13,909,451
Oklahoma	2,885,038	2,329,615	2,325,840	2,842,673	3,818,054	3,501,325	3,774,080	2,793,954	1,908,394	1,255,466
Pennsylvania bituminous	171,879,913	130,633,773	136,928,019	153,041,638	132,964,639	131,202,163	143,516,241	124,462,787	97,658,698	74,775,862
Tennessee	6,040,268	4,556,555	5,454,011	5,788,741	5,783,367	5,610,959	5,405,464	5,130,428	4,721,548	3,537,882
Texas	1,187,329	1,147,011	1,008,375	1,091,158	1,326,385	1,182,034	1,100,668	833,872	716,020	636,390
Utah	4,720,217	4,488,157	4,690,342	4,373,793	4,781,480	4,842,544	5,160,521	4,257,541	3,350,044	2,852,127
Virginia	11,761,643	10,693,464	12,799,443	14,133,386	12,916,042	11,900,933	12,748,306	10,907,377	9,698,680	7,692,180
Washington	2,926,392	2,653,667	2,537,890	2,586,568	2,635,062	2,519,901	2,521,327	2,301,928	1,846,461	1,591,426
West Virginia	107,899,941	101,662,897	122,380,959	143,509,340	145,122,447	132,952,159	138,518,855	121,472,638	101,473,172	85,608,735
Wyoming	7,575,031	6,757,468	6,553,232	6,512,288	6,753,656	6,571,683	6,704,790	6,088,133	4,993,686	4,170,963
Other States 2/	20,066	16,953	12,625	19,332	32,424	27,488	20,454	27,622	24,505	23,196
Total bituminous coal	564,564,662	483,686,538	520,052,741	573,366,985	517,763,352	500,744,970	534,988,593	467,526,299	382,089,396	309,709,872

1/ For purposes of historical comparison and statistical convenience, the figures include the output of lignite and of anthracite and semianthracite outside of Pennsylvania.

2/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon. The States reporting are not identical from year to year.

TABLE VIII. - PRODUCTION OF BITUMINOUS COAL, BY STATES, FOR THE YEARS 1923 TO 1940, INCLUSIVE, IN NET TONS (Continued) 1/

(Exclusive of product of wagon mines producing less than 1,000 tons)

State	1933	1934	1935	1936	1937	1938	1939 (Prel.)	1940 (Preliminary) Jan.-Dec. inclusive	Jan.-Sept. inclusive	Oct.-Dec. inclusive
Alaska	96,467	107,508	119,425	136,593	131,657	154,682	146,000	150,000	104,000	46,000
Alabama	8,799,909	9,142,117	8,504,510	12,229,287	12,440,322	11,061,493	11,995,000	15,150,000	11,212,000	3,938,000
Arkansas	882,924	856,432	1,133,279	1,622,787	1,510,753	1,197,047	1,122,000	1,550,000	1,028,000	522,000
Colorado	5,229,767	5,210,933	5,910,511	6,811,802	7,187,211	5,663,144	5,890,000	6,516,000	4,397,000	2,119,000
Georgia and North Carolina	43,396	95,856	22,734	24,288	(3)	(3)	25,000	29,000	22,000	7,000
Illinois	37,413,145	41,272,384	44,525,469	50,926,999	51,601,638	41,912,085	46,450,000	49,495,000	35,370,000	14,125,000
Indiana	13,761,052	14,793,643	15,754,214	17,822,536	17,764,774	14,758,484	16,650,000	18,565,000	13,361,000	5,204,000
Iowa	3,194,983	3,366,992	3,650,163	3,960,700	3,637,054	3,103,187	3,050,000	2,908,000	2,063,000	845,000
Kansas	2,217,622	2,508,254	2,606,164	2,944,028	2,892,560	2,654,141	2,920,000	3,166,000	2,237,000	930,000
Kentucky: Eastern	28,265,332	30,310,456	32,626,817	39,151,586	38,523,554	31,177,472	34,730,000	39,732,000	30,300,000	9,432,000
Western	7,834,397	8,214,779	8,134,122	8,370,364	8,562,890	7,367,746	8,075,000	8,668,000	6,411,000	2,257,000
Maryland	1,530,748	1,627,112	1,673,099	1,703,589	1,548,980	1,281,413	1,468,000	1,478,000	1,086,000	392,000
Michigan	406,584	621,741	628,384	626,145	562,262	494,481	434,000	440,000	313,000	127,000
Missouri	3,432,212	3,352,283	3,645,996	3,984,999	4,091,394	3,436,118	3,275,000	3,570,000	2,522,000	1,047,000
Montana	2,152,207	2,565,702	2,756,906	2,986,524	2,965,193	2,732,050	2,810,000	2,974,000	1,998,000	976,000
New Mexico	1,226,236	1,259,323	1,388,877	1,596,775	1,714,955	1,239,037	1,206,000	1,081,000	785,000	296,000
North Dakota	1,732,272	1,753,888	1,955,510	2,215,335	2,250,837	2,050,099	2,089,000	2,256,000	1,273,000	983,000
South Dakota	59,375	42,407	13,243	41,331	46,979	48,058	50,000			
Ohio	19,588,763	20,690,564	21,153,151	24,110,078	25,177,867	18,590,618	19,632,000	22,092,000	16,682,000	5,410,000
Oklahoma	1,238,244	1,208,289	1,229,398	1,540,303	1,600,295	1,244,732	1,178,000	1,613,000	1,070,000	543,000
Pennsylvania bituminous	79,295,944	89,825,875	91,404,670	109,887,470	111,002,289	77,704,537	92,140,000	112,907,000	81,622,000	31,285,000
Tennessee	3,774,761	4,135,790	4,137,802	5,108,195	5,212,471	4,472,403	5,280,000	6,010,000	4,570,000	1,440,000
Texas	821,878	759,289	757,529	842,624	910,352	878,685	810,000	661,000	540,000	121,000
Utah	2,674,986	2,406,183	2,946,918	3,246,565	3,809,476	2,946,951	3,340,000	3,524,000	2,322,000	1,202,000
Virginia	8,178,642	9,376,681	9,667,018	11,661,636	13,795,239	12,283,036	13,230,000	14,950,000	11,265,000	3,685,000
Washington	1,394,068	1,382,991	1,599,206	1,812,104	2,001,449	1,566,973	1,690,000	1,688,000	1,171,000	517,000
West Virginia	94,343,535	98,134,393	99,179,061	117,925,706	118,646,343	93,288,172	107,938,000	126,302,000	95,508,000	30,794,000
Wyoming	4,013,167	4,367,961	5,177,142	5,780,590	5,918,359	5,203,877	5,383,000	5,748,000	3,892,000	1,856,000
Other States 2/	17,837	38,196	24,844	15,364	3/ 24,296	3/ 34,043	9,000	22,000	9,000	13,000
Total bituminous coal	333,630,533	359,368,022	372,373,122	439,087,903	445,531,449	348,544,764	393,065,000	453,245,000	333,133,000	120,112,000

1/ For purposes of historical comparison and statistical convenience, the figures include the output of lignite and of anthracite and semianthracite outside of Pennsylvania.

2/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon. The States reporting are not identical from year to year.

3/ Georgia and North Carolina included with "Other States."

By M. E. McMillan, R. McKinney, and R. L. Anderson,
W. H. Young, Chief, Research Section,
O. A. Lash, Chief, Economics Branch.

Bituminous Coal Division,
February 15, 1941.

TABLE IX. - PERCENTAGE OF BITUMINOUS COAL PRODUCED, BY STATES, FOR THE YEARS 1923 TO 1940, INCLUSIVE

State	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Alaska	.02	.02	.02	.02	.02	.03	.02	.03	.03	.03
Alabama	3.62	3.96	3.85	3.66	3.82	3.52	3.35	3.33	3.14	2.54
Arkansas	.23	.30	.24	.25	.30	.33	.32	.33	.30	.33
Colorado	1.83	2.16	1.98	1.86	1.88	1.97	1.86	1.75	1.73	1.81
Georgia and North Carolina	.02	.03	.02	.02	.02	.03	.02	.01	.01	.01
Illinois	14.05	14.13	12.87	12.10	9.05	11.17	11.34	11.49	11.59	10.81
Indiana	4.65	4.44	4.08	4.04	3.46	3.27	3.43	3.53	3.74	4.30
Iowa	1.01	1.13	.91	.81	.57	.74	.79	.83	.89	1.25
Kansas	.79	.88	.87	.77	.66	.56	.56	.52	.52	.63
Kentucky: Eastern	6.00	7.47	8.24	8.28	9.26	9.10	8.60	8.62	8.21	8.32
Western	1.93	1.86	2.34	2.70	4.10	3.25	2.70	2.34	2.25	3.08
Maryland	.41	.44	.52	.54	.54	.54	.50	.49	.52	.46
Michigan	.21	.17	.16	.12	.15	.12	.15	.14	.09	.14
Missouri	.60	.51	.52	.52	.59	.75	.75	.82	.95	1.31
Montana	.56	.60	.58	.49	.61	.66	.64	.64	.62	.69
New Mexico	.52	.58	.49	.49	.56	.54	.49	.42	.41	.41
North Dakota	.25	.25	.26	.24	.30	.33	.35	.37	.40	.56
South Dakota	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	.01	.02
Ohio	7.18	6.30	5.39	4.86	3.05	3.12	4.43	4.82	5.34	4.49
Oklahoma	.51	.48	.45	.50	.74	.70	.70	.60	.50	.41
Pennsylvania bituminous	30.44	27.00	26.33	26.69	25.68	26.20	26.83	26.62	25.56	24.15
Tennessee	1.07	.94	1.05	1.01	1.12	1.12	1.01	1.10	1.24	1.14
Texas	.21	.24	.19	.19	.26	.24	.20	.18	.19	.21
Utah	.84	.93	.90	.76	.92	.97	.97	.91	.87	.92
Virginia	2.08	2.21	2.46	2.46	2.49	2.38	2.38	2.33	2.54	2.48
Washington	.52	.55	.49	.45	.51	.50	.47	.49	.48	.51
West Virginia	19.11	21.02	23.53	25.03	28.03	26.55	25.89	25.98	26.56	27.64
Wyoming	1.34	1.40	1.26	1.14	1.31	1.31	1.25	1.30	1.31	1.35
Other States 2/	(1)	(1)	(1)	(1)	(1)	(1)	(1)	.01	(1)	(1)
Total bituminous coal	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

State	1933	1934	1935	1936	1937	1938	1939 (Prel.)	1940 (Preliminary) Jan.-Dec. incl.	Jan.-Sept. incl.	Oct.-Dec. incl.
Alaska	.03	.03	.03	.03	.03	.05	.04	.03	.03	.04
Alabama	2.63	2.54	2.28	2.78	2.79	3.17	3.05	3.34	3.37	3.28
Arkansas	.26	.24	.31	.37	.34	.34	.29	.34	.31	.44
Colorado	1.57	1.45	1.59	1.55	1.61	1.62	1.50	1.44	1.32	1.77
Georgia and North Carolina	.01	.01	.01	.01	(3)	(3)	.01	.01	.01	(1)
Illinois	11.21	11.48	11.96	11.60	11.58	12.03	11.82	10.92	10.62	11.76
Indiana	4.13	4.12	4.23	4.06	3.99	4.23	4.24	4.10	4.01	4.33
Iowa	.96	.94	.98	.90	.82	.89	.77	.64	.62	.70
Kansas	.66	.70	.72	.67	.65	.76	.74	.70	.67	.77
Kentucky: Eastern	8.47	8.44	8.76	8.92	8.65	8.95	8.84	8.77	9.09	7.85
Western	2.35	2.28	2.18	1.91	1.92	2.11	2.05	1.91	1.92	1.88
Maryland	.46	.45	.45	.39	.34	.37	.37	.32	.33	.33
Michigan	.12	.17	.17	.14	.13	.14	.11	.10	.09	.10
Missouri	1.03	.93	.98	.91	.92	.99	.83	.78	.76	.87
Montana	.65	.71	.74	.68	.66	.78	.71	.66	.60	.81
New Mexico	.37	.35	.37	.36	.39	.36	.31	.24	.24	.25
North Dakota	.53	.49	.53	.50	.51	.59	.53	.50	.38	.82
South Dakota	.02	.01	(1)	.01	.01	.01	.01			
Ohio	5.87	5.76	5.68	5.49	5.65	5.34	5.00	4.87	5.01	4.50
Oklahoma	.37	.33	.33	.35	.36	.36	.30	.36	.32	.45
Pennsylvania bituminous	23.77	25.00	24.55	25.02	24.92	22.29	23.45	24.91	24.50	26.05
Tennessee	1.13	1.15	1.11	1.16	1.17	1.28	1.34	1.32	1.37	1.20
Texas	.25	.21	.20	.19	.20	.25	.21	.14	.16	.10
Utah	.80	.67	.79	.74	.85	.85	.85	.78	.70	1.00
Virginia	2.45	2.61	2.60	2.66	3.10	3.52	3.37	3.30	3.38	3.07
Washington	.42	.39	.42	.41	.45	.45	.43	.37	.35	.43
West Virginia	28.28	27.31	26.63	26.86	26.63	26.77	27.46	27.87	28.67	25.64
Wyoming	1.20	1.22	1.39	1.32	1.33	1.49	1.37	1.27	1.17	1.55
Other States 2/	(1)	.01	.01	.01	(1)	.01	(1)	.01	(1)	.01
Total bituminous coal	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

1/ Less than 0.01.
2/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon. The States reporting are not identical from year to year.
3/ Georgia and North Carolina included with "Other States."

By M. R. McMillan, R. McKinney, and R. L. Anderson,
W. H. Young, Chief, Research Section,
O. A. Lamb, Chief, Economics Branch.

Bituminous Coal Division,
February 15, 1941.

United States Circuit Court of Appeals for Fifth Circuit.

Tennessee Coal, Iron & Railroad Company, A Corporation, Appellant,
vs. Civil Action No. 5232.
Muscoda Local No. 123, an unincorporated association affiliated with the International Union of Mine, Mill and Smelters Workers, et al., Appellees.

Sloss-Sheffield Steel & Iron Company, A Corporation, Appellant,
vs. Civil Action No. 5233.
Sloss Red Ore Local No. 109, and unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, et al., Appellees.

Republic Steel Corporation, A Corporation, Appellant,
vs. Civil Action No. 5234.
Raimund Local No. 121, an unincorporated association affiliated with the International Union of Mine, Mill & Smelter Workers, et al., Appellees.

Now come appellants (plaintiffs in the Court below) separately and severally, and serve upon appellees (defendants and defendant-intervener in the Court below) separately and severally, and file with the District Court the following designation of the portions of the record, proceedings and evidence to be contained in the record on appeal:

1. Stipulation executed between the parties on December 3, 1941, and filed in the District Court on the 8 day of December, 1941.

2. Appellant Tennessee Coal, Iron & Railroad Company's original complaint and exhibits thereto, filed on April 4, 1941.

3. Appellant Sloss-Sheffield Steel & Iron Company's original complaint and exhibits thereto, filed on April 4, 1941.

4. Appellant Republic Steel Corporation's original complaint and exhibits thereto, filed on April 4, 1941.

5. Answer of Muscoda Local No. 21935, Red Ore Miners Union, etc., Fred Trammell, Joe P. Bell, W. R. Headrick, and I. V. Robinson and Wenonah Local No. 21936, Red Ore Miners Union, etc., W. M. Kendrick, G. L. Batson, Will McGhee, and W. T. Maxwell, and Ishkooda Local No. 21937, Red Ore Miners Union, etc., J. S. Pitts, James A. Bailey, Jr., A. E. Wesley, John White, James Knox, Nathan Smith, and James Snow; and S. E. Roper and W. O. Hare, filed May 17, 1941, in case No. 5232.

6. The motion to dismiss, and answer of defendants, Muscoda Local No. 123, an unincorporated association affiliated with the International Union of Mine Mill and Smelter Workers, and W. C. Gunnin, Pete Dulaney, R. H. Martin and John Thompson, etc., and Wenoah Local No. 157, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, and C. J. McDaniel, W. B. Lemley, R. E. Lemley, and Ward Jefferson, individually, etc., and Ishkooda Local No. 152, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers and E. A. Sisemore, L. H. McBrayer, Elmore Mitchell and Dennis Hart, individually, etc., and Van D. Jones, C. L. Pegues and Frank Allen, etc., filed in case No. 5232 on May 17, 1941.

7. Motion of defendants to dismiss bill of complaint and answer of defendants to bill of complaint in case No. 5233 filed on May 17, 1941.

8. Motion of defendants to dismiss bill of complaint and answer of defendants in case No. 5234 filed May 17, 1941.

9. Amendments to answer of Muscoda Local No. 123, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, and W. C. Gunnin, Pete Dulaney, R. H. Martin, and John Thompson, etc., and Wenonah Local No. 157, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, and C. J. McDaniel, W. B. Lemley, R. E. Lemley and Ward Jefferson, individually, etc., and Ishkooda Local No. 152, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, and E. A. Sisemore, L. H. McBrayer, Elmore Mitchell, and Dennis Hart, individually, etc.; and Van D. Jones, C. L. Pegues, and Frank Allen, etc., filed June 3, 1941, excluding therefrom the list of names on page 3 thereof, beginning with the names "Agree, Frank; Ashley, Horace C.; Allison, Toll" and substituting in lieu of said list of names the following: "Agree, Frank; Ashley, Horace C.; Allison, Toll, and approximately 1,800 others" in case No. 5232.

10. Amendment to answer of all defendants in case No. 5233, filed on June 3, 1941, excluding therefrom the list of names beginning on page 3 thereof, beginning with the names "Ashworth, J. L.; Artis, David; Allen, Sam; Anderson, Thad," and substituting in lieu of said list of names the following: "Ashworth, J. L.; Artis, David; Allen, Sam; Anderson, Thad, and approximately 575 others."

11. Amendment to answer of Raimund Local No. 121, an unincorporated association affiliated with the International Union of Mine, Mill and Smelter Workers, and John Butler, Louis Tarrant, and B. G. Stephens, etc., filed June 3, 1941, excluding therefrom the list of names beginning on page 3 thereof, with the names "Anderson, Hubert Lavell; Atkinson, James Edward," and substituting in lieu of said list of names the following: "Anderson, Hubert

Lavell; Atkinson, James Edward, and approximately 505 others", in case No. 5234.

12. Amendment to complaint of plaintiff, Tennessee Coal, Iron & Railroad Company, filed on July 7, 1941.

13. Amendment to complaint of plaintiff Sloss-Sheffield Steel & Iron Company, filed on July 7, 1941.

14. Amendment to complaint of plaintiff Republic Steel Corporation, filed on July 7, 1941.

15. Order allowing amendment of complaint of Republic Steel Corporation in Case No. 5234, filed July 31, 1941.

16. Amendment of plaintiff Republic Steel Corporation to complaint in case No. 5234, filed July 31, 1941.

17. Court's order consolidating cases for trial, made and filed on July 7, 1941.

The papers hereinafter set forth are substantially the same in each of said cases, and by agreement are to be set forth in the record one time only and considered as if set out in each case separately:

18. Notice of the Court setting the case for the purpose of pretrial hearing on Tuesday, May 20, 1941.

19. Order on pretrial hearing dated May 22, 1941, and filed May 22, 1941.

20. The order setting the case down for trial on the merits on June 23, 1941, in accordance with the pretrial order, and decrees in reference to various motions, etc., filed on May 26, 1941.

21. Motion of Philip B. Fleming, Administrator, etc., to intervene, together with pleadings of said Fleming to accompany the motion to intervene, filed May 24, 1941.

22. Order of Court granting motion of Philip B. Fleming to intervene, and requiring compliance with pretrial agreement and pretrial order, dated June 7, 1941, and filed June 11, 1941.

23. Plaintiffs' written interrogatories to Philip B. Fleming filed on June 16, 1941.

24. Motion of plaintiffs to dismiss counter claim of American Federation of Labor, et al., made and filed on June 19, 1941.

25. Motion of plaintiffs to dismiss the counter claims of International Union of Mine, Mill and Smelter Workers, et al., made and filed on June 19, 1941.

26. Plaintiffs' amendment of complaint made and filed on June 19, 1941.

27. Order of Court continuing the trial of the case from June 23, 1941, to July 8, 1941, filed on June 18, 1941.

28. Objections and answers of Philip B. Fleming, Administrator, to written interrogatories propounded by plaintiffs, filed June 27, 1941.

29. Answers of Philip B. Fleming, Intervener, to interrogatories, filed on July 1, 1941.

30. Amended answer of Philip B. Fleming, Administrator, filed on July 5, 1941.

31. The opinion of the District Court filed August 13, 1941.

32. Letter of the United States District Judge, dated August 13, 1941, and directed to the attorneys representing the various parties in the case.

33. Motion of plaintiffs for judgment or decree in their favor filed September 6, 1941.

34. Amendment to answer of defendants affiliated with C. I. O. in case No. 5234,—Republic Steel Corporation, plaintiff,—filed July 31, 1941.

Amendment to answer of defendants affiliated with C. I. O. in case No. 5233,—Sloss-Sheffield Steel & Iron Company, plaintiff,—filed July 31, 1941.

Amendment to answer of defendants affiliated with American Federation of Labor in case No. 5232,—Tennessee Coal, Iron & Railroad Company, plaintiff, filed September 10, 1941; amendment filed October 6, 1941, and amendment filed October 8, 1941.

Appellants suggest that in lieu of printing in the record the amendments above referred to in full that the following, by stipulation, be designated for printing in the record:

Amendments to cross-claims to the complaints as amended, which, in effect, added additional claimants to the cross-claims, and entered appearances as additional attorneys for defendants affiliated with the C. I. O. Lee Pressman and Joe Kovner of Washington, D. C., were made as follows:

In case No. 5234,—Republic Steel Corporation Plaintiff,—filed July 31, 1941, adding 16 additional claimants, and in the same case, amendment filed October 6, 1941, adding 113 additional claimants; and amendment to the answer and cross-claim in the same case filed October 8, 1941, adding as additional parties claimant widows, heirs at law, and administrators of twelve deceased employees.

In case No. 5233,—Sloss-Sheffield Steel & Iron Company, Plaintiff,—amendment to answer and cross-claim of defendants filed July 31, 1941, adding seven additional claimants; amendment to answer and cross-bill filed October 6, 1941, adding 9 additional claimants, and amendment to answer and cross-claim filed October 8, 1941, adding as additional parties claimant widows, heirs at law and administrators of six deceased employees.

In case No. 5232,—Tennessee Coal, Iron & Railroad Company, Plaintiff,—amendment to answer and cross-claim of defendants affiliated with American Federation of Labor, filed September 10, 1941, adding 556 additional claimants; amendment to answer and cross-claim of defendants affiliated with International Union of Mine, Mill and Smelter Workers, filed October 6, 1941, adding 85 additional claimants; amendment to answer and cross claim of defendants affiliated with International Union of Mine, Mill and Smelter Workers, filed October 8, 1941, adding as additional parties claimant widows, heirs at law, and administrators of 33 deceased employees.

The plaintiffs, within twenty days from the time of the filing of such amendments, filed as to each of them their motions to dismiss the counterclaims as amended, assigning as grounds for such motions the same grounds assigned, separately and severally, from I to V, both inclusive, as filed to said amendments to cross claims filed June 19, 1941.

It is stipulated and agreed that the above statement in reference to such amendments and motions shall be used for the record in lieu of the copying and printing thereof at length.

It is further stipulated that all amendments to the complaints of the plaintiffs, and amendments to the answer and counterclaims of defendants, shall be considered as having been made within the time allowed for pleading, and each responsive pleading, wherever necessary, shall be considered as having been refiled when amendments to the various pleadings have been made.

35. Judgment of the Court signed on September 10, 1941, and entry of Judgment thereon made and filed on the 10th day of September, 1941.

36. Decree of the Court overruling motion of plaintiffs for a judgment or decree in their favor and against the separate and several defendants signed and filed on the 3rd day of October, 1941.

37. Plaintiffs' motion to amend judgment filed September 19, 1941.

38. Plaintiffs' causes for and in support of their motion to amend the judgment filed on September 19, 1941.

39. The Court's findings of fact filed on the 10th day of September, 1941, and entry of judgment thereon on the 10th day of September, 1941.

40. Plaintiffs' objections to findings of fact and motion for amendment thereof filed September 19, 1941.

41. The Court's conclusions of law signed on September 10, 1941, and entry of judgment thereon on September 10, 1941.

42. Plaintiffs' objections to the conclusions of law filed on September 19, 1941.

43. Plaintiffs' motion for a new trial and affidavit in support thereof filed on the 19th day of September, 1941.

44. Judgment and decree of the Court overruling and denying plaintiffs' motion to amend judgment, their objections to findings of fact, their objections to and motion to amend findings of fact, and their objections to and motion to amend the conclusions of law filed on October 20, 1941.

45. Order and decree of the Court overruling plaintiffs' motion for a new trial filed November 8, 1941.

46. Notice of appeal filed on the 8th day of December, 1941, together with the citation of service thereon.

47. Appellants have filed with the District Court as a part of their designation of contents of record on appeal two copies of the Reporters' transcript of the evidence or proceedings on the trial, which was stenographically reported, and they designate as the evidence to be contained in the record on appeal all portions of the transcript of the evidence or proceedings as thus stenographically reported except those portions thereof the elimination of which has been indicated by red ink lines.

48. Appellants designate as the remaining evidence to be contained in the record on appeal, in addition to the stenographic transcript above referred to, the exhibits and papers which were admitted and received in evidence,

and which are included in Volume I, marked Exhibit "A", filed herewith and made a part hereof, and the exhibits and papers which were offered in evidence and their admission into evidence on objections of opposing parties refused by the Court, and which are included in Volume II, marked Exhibit "B", filed herewith and made a part hereof.

49. Appellants' statement of points.

E. L. ALL,
BORDEN BURR,
Attorneys for the above named Appellants, separately and severally.

Address: Birmingham, Alabama.

We hereby certify that we have served upon each of the appellees in the above named cases a full and complete copy of all the foregoing.

Dated this 14 day of January, 1942.

BORDEN BURR.

Filed January 14, 1942.

CHAS. B. CROW,
Clerk U. S. Dist. Court.

4787 APPELLEES' DESIGNATION OF ADDITIONAL PORTIONS OF THE RECORD, PROCEEDINGS AND EVIDENCE.

Tennessee Coal, Iron & Railroad Company, A Corporation, Appellant,

vs. Civil Action No. 5232.

Muscoda Local No. 123, an unincorporated association affiliated with the international Union of Mine, Mill & Smelter Workers, et als, (Defendants), Appellees.

Sloss-Sheffield Steel & Iron Company, A Corporation, Appellant,

vs. Civil Action No. 5233.

Sloss Red Ore Local No. 109, an unincorporated association affiliated with the International Union of Mine, Mill & Smelter Workers, et als, (Defendants), Appellees.

Republic Steel Corporaton, A Corporation, Appellant,

vs. Civil Action No. 5234.

Raimund Local No. 121, an unincorporated association affiliated with the International Union of Mine, Mill & Smelter Workers, et als, (Defendants), Appellees.

Now come all the defendants in the above styled causes and all the individuals who have become parties by various amendments filed, said parties numbering several thousand, Appellees, in each of said causes, and do file this their designation of additional portions of the record, proceedings and evidence to be included in the record on appeal, which were not designated by the appellant:

1. Motion for temporary restraining order or preliminary injunction filed April 4, 1941.

2. Order setting motion for temporary restraining order or preliminary injunction for hearing on April 17, 1941, filed April 4, 1941.

3. Return of service of process filed April 10th, 1941.

4. Temporary restraining order filed April 14, 1941.

5. Order continuing the temporary restraining order filed April 24, 1941.

6. Order continuing temporary restraining order filed May 5, 1941.

7. Order continuing temporary restraining order filed May 14, 1941.

8. Defendants motion for summary judgment and accompanying affidavit filed May 20, 1941 and order thereon dated May 20, 1941.

9. Certification to attorney general filed May 26, 1941.

10. Notice of motion to intervene filed May 24, 1941.

11. Motion of intervener for modification of order and for continuance, filed June 10, 1941.

12. Plaintiff's objection to Intervener's motion for continuance. Filed June 13, 1941.

13. Motion to Intervener for production of documents, filed June 16, 1941.

14. Affidavit of Intervener on production of documents, filed June 23, 1941.

15. Order on production of documents filed June 28, 1941.

16. Motion of Intervener to take oral depositions filed June 27, 1941.

17. Praecipe on issue of subpoena. Filed June 27, 1941.

18. Objection of plaintiffs to Intervener taking deposition in Birmingham. Filed June 27, 1941.

19. Objection to Intervener, Fleming, to questions of plaintiff in taking deposition of witness, L. C. Gunter of Knoxville, Tennessee. Filed July 11, 1941.

20. Objection of Intervener, Fleming, to questions of plaintiff in taking deposition of witness, D. C. Kennedy of Charleston, West Virginia, Filed July 7, 1941.

21. Objection of Intervener, Fleming, to questions of plaintiff in taking deposition of witness, W. J. Jenkins of St. Louis, Missouri. Filed July 5, 1941.

22. Intervener Fleming's motion for continuance. Filed July 3, 1941.

23. Order filed July 3, 1941 on objection of Fleming to interrogatories propounded to him.

24. Order denying Intervener, Fleming, the right to take oral depositions. Filed July 3, 1941.

25. Exceptions of Intervener, Fleming, to order denying him the right to take oral depositions. Filed July 5, 1941.

26. Objection of Fleming to interrogatories propounded to witnesses at Terre Haute, Indiana, filed July 5, 1941.

27. Objection of Fleming to interrogatories propounded to witnesses at Pittsburgh, Kansas. Filed July 7, 1941.

28. Objection of Fleming to interrogatories propounded to Butte, Montana witnesses. Filed July 7, 1941.

29. Motion to view premises. Filed July 8, 1941.

30. Order on motion to view premises. Filed July 30, 1941.

31. Appeal bond filed by plaintiffs, filed December 5, 1941.

32. The appellees now designate as additional portions of a stenographic transcript of the evidence and proceedings filed by the appellant, all those portions thereof, the elimination of which was indicated in red ink lines by the appellant.

The appellees also had a Court reporter throughout the trial of these causes and there are differences between the transcript filed by the appellants and the transcript prepared by the reporter employed by the appellees. Counsel have agreed to try to reconcile these differences but if there remain any differences which cannot be worked out between counsel, appellees reserve the right to have the transcript truly disclose what occurred in the District Court in the trial of these causes, and further reserve the right to submit differences to the District Court to be settled by the Court so that the record shall be made to conform to the truth as provided in Rule 75(h) of the Rules of Civil Procedure and of the Rules of the United States Circuit Court of Appeals for the Fifth Circuit.

33. Appellees further designate all exhibits which were introduced in evidence and which have not been designated by the appellants and wherever the appellants designated a portion of an exhibit introduced into evidence, appellees

designate the portion of such exhibit not designated by appellant.

Throughout the documents filed with the appellant's designation and attached thereto there are to be found numerous proposals and suggestions in the nature of stipulations, or assumptions that stipulations have been made, and as to all of these, the appellees do not consent and agree by the filing of this designation. However, appellees will confer with counsel for appellants and endeavor to work out these matters for the convenience of the Court.

CRAMPTON HARRIS,
LEE PRESSMAN,
Attorneys for Muscoda Local No. 123, Sloss Red Ore Local No. 109, Raimund Local No. 121, et als, Appellees.
J. Q. SMITH, RALPH W. QUIN and W. F. SPENCER,
Attorneys for Muscoda Local No. 21935, et al. Case 5232.

I hereby certify that I have served a copy of the foregoing upon Mr. Borden Burr, attorney for appellant in Case No. 5232; and a copy upon Mr. Borden Burr, attorney for appellant in Case No. 5234; and have served a copy upon Mr. Ernest All, attorney for appellant in Case No. 5233, by mailing it to each of them by United States mail, postage prepaid, to the last known address of said attorneys.

This the 24th day of January, 1942.

CRAMPTON HARRIS,
Attorney for Appellees in #5232, #5233, #5234.

Filed January 24, 1942. Chas. B. Crow, Clerk, U. S. District Court.

4792 DESIGNATION OF ADDITIONAL PORTIONS OF THE RECORD, PROCEEDINGS AND EVIDENCE.

In the District Court of the United States for the Northern District of Alabama, Southern Division.

Tennessee Coal, Iron & Railroad Company, A Corporation, et al, Petitioners and Plaintiffs,

vs.

Muscoda Local No. 123, an unincorporated association affiliated with the International Union of Mine, Mill & Smelter Workers, and W. C. Gunnin, et al, Defendants,

Philip B. Fleming, Administrator of the Wage and Hour Division, United States Department of Labor, Intervener.

Civil Action File No. 5232, Civil Action File No. 5233, Civil Action File No. 5234.

Comes Philip B. Fleming, Administrator of the Wage and Hour Division, Intervener in these causes, and adopts and files as his designation of additional portions of the record, proceedings and evidence of these causes, the designation of additional portions of the record, proceedings and evidence filed January 24, 1942, by defendants and other appellees who have become parties.

IRVING J. LEVY,
(Irving J. Levy)
Associate Solicitor.
JEROME A. COOPER,
(Jerome A. Cooper)
Regional Attorney.

Served by mailing a copy of the foregoing this 24th day of January, 1942, to the following:

Bradley, Baldwin, All and White,
Attorneys for Sloss-Sheffield Steel & Iron Co., Plaintiffs,
Comer Building,
Birmingham, Alabama.

Benners, Burr, McKamy and Forman,
Attorneys for Tennessee Coal, Iron & Railroad Co. and Republic Steel Corporation, Plaintiffs,
Brown Marx Building,
Birmingham, Alabama.

Crampton Harris, Esquire,
Attorney for Muscoda Local No. 123, et als, defendants,
First National Building,
Birmingham, Alabama.

Messrs. J. Q. Smith, Ralph W. Quinn, and W. F. Spencer,
Attorneys for Muscoda Local No. 21935, et als, defendants,
Earley Building,
Birmingham, Alabama.

JEROME A. COOPER.

Filed January 24, 1942, Chas. B. Crow, Clerk, U. S. Dist. Court:

4794 CLERK'S CERTIFICATE.

The United States of America,
Northern District of Alabama.

I, CHAS. B. CROW, Clerk of the District Court of the United States for the Northern District of Alabama, Southern Division, do hereby certify that the foregoing pages numbered from Volume I, page one (1) to Volume XII, page Four Thousand Seven hundred and Ninety-four (4794) both inclusive, is a true, full and correct transcript of the record on appeal in the matter of Tennessee Coal, Iron & Railroad Company, a Corporation, Appellant, vs. Muscoda Local No. 123 Etc. Et Al., Appellees, and Sloss-Sheffield Steel & Iron Company, A Corporation, Appellant, vs. Sloss Red Ore Local No. 109 Etc. Et Al., Appellees, and Republic Steel Corporation, a Corporation, A Corporation, Appellant vs. Raimund Local No. 121 Etc. Et Al., Appellees as fully as the same does appear of record and on file in my office.

In Witness Whereof, I have hereunto subscribed my name and affixed the seal of said Court, at Birmingham, in said District on this the Second day of April, A. D. 1942.

CHAS. B. CROW,
(Chas. B. Crow)
Clerk, U. S. District Court
Northern District of Alabama.

(Seal)

[fol. 4937] That thereafter the following proceedings were had in said cause in the United States Circuit Court of Appeals for the Fifth Circuit, viz:

ARGUMENT AND SUBMISSION

Extract from the Minutes of February 2nd, 1943

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY

versus

MUSCODA LOCAL No. 123, etc., et al.

SLOSS SHEFFIELD STEEL & IRON COMPANY

versus

SLOSS RED ORE LOCAL No. 109, etc., et al.

REPUBLIC STEEL CORPORATION

versus

RAIMUND LOCAL No. 121, etc., et al.

On this day this cause was called, and after argument by Borden Burr, Esq., and E. L. All, Esq., for appellants, and Crampton Harris, Esq., for appellees, and Miss Bessie Margolin, Assistant Solicitor, United States Department of Labor, for Administrator of the Wage and Hour Division, was submitted to the Court.

[fol. 4938] OPINION OF THE COURT AND DISSENTING OPINION BY SIBLEY, CIRCUIT JUDGE—Filed March 16, 1943

IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY, Appellant,

versus

MUSCODA LOCAL No. 123, etc., et al., Appellees

SLOSS-SHEFFIELD STEEL & IRON COMPANY, Appellant,

versus

SLOSS RED ORE LOCAL No. 109, etc., et al., Appellees

REPUBLIC STEEL CORPORATION, Appellant,

versus

RAIMUND LOCAL No. 121, etc., et al., Appellees

Appeals from the District Court of the United States for the Northern District of Alabama

(March 16, 1943)

Before Sibley, Holmes, and McCord, Circuit Judges

HOLMES, Circuit Judge:

These appeals are from a judgment declaring that the working time of underground iron-ore mining employees, [fol. 4939] comprising the work-week of such employees under Section 7 of the Fair Labor Standards Act of 1938,[1] includes time spent by them on the surface in checking in and out, obtaining and returning tools, lamps, and carbide, and time spent underground from the time they are required to report at the portal of the mine until they emerge therefrom at the end of their shift, less the fixed lunch period during which the employees are relieved of all duties; and declaring further that, since such aggregate working time exceeded the maximum work-week provided by said Act,

[1] 29 U. S. C. A., Sec. 207.

appellants violated the Act in not compensating the employees as therein provided.

Appellants, corporations principally engaged in mining iron ore, filed separate civil actions under the Declaratory Judgments Act,[2] which were consolidated for trial, and as to which a single judgment was entered without objection. The actual controversy underlying federal jurisdiction related only to the hours of employment during the time intervening between the effective date of the Act, October 24, 1938, and the dates the respective petitions were filed in April, 1941. Upon a pre-trial conference it was agreed that the primary issue was what constituted the working time that made up the work-week of the underground ore-mining employees within the meaning of Section 7 of the Fair Labor Standards Act.

Section 7 of the Act requires every employer to pay overtime wages to any employee that is engaged in commerce or in the production of goods for commerce for a work-week longer than 44 hours between October 24, 1938, and October 23, 1939, longer than 42 hours between October 24, 1939, and October 23, 1940, and longer than 40 hours thereafter. The Act defines the word "employ" to include "to suffer [fol. 4940] or permit to work." It is without dispute that, during the period involved in this suit, each employee represented by appellees was engaged in the production of goods for commerce, and that each appellant required its underground employees to work 40 hours each week at their regular working places in the depths of the mine. Whether, in addition thereto, such employees were entitled under the Act to have included in the computation of their work-week the time consumed each week in travelling from the portal of the mine to their regular working places, and in returning therefrom to the portal at the end of the shift, plus the aggregate of the time consumed each week by such employees in checking in and out and obtaining and returning lamps, carbide, and tools on the surface, or whether they were entitled to have any part of such time included in the working time comprising the work-week, is the precise question for decision.

The Act was drafted for application on a national scale, and it does not undertake to define what is working time in any particular industry or class of industries. What con-

[2] 28 U. S. C. A., Sec. 400, 52 Stat. 1060.

stitutes working time is a question of fact depending upon the particular circumstances, and is a matter for the determination of the courts in controverted cases. In the great majority of instances no question of this nature will arise, but in doubtful cases such as this the issue must be determined in accordance with common sense and the general concept of work or employment; and, as in other cases, the appellate court is controlled by the rule that the finding of the trial court upon decisive questions of fact must be upheld unless it is clearly erroneous.

There is no real dispute as to the facts upon which the travel-time question turns, but different inferences as to the working time may fairly and reasonably be drawn from these facts. The parties on both sides of this controversy petitioned the court below to decide the controverted issues between them, i. e., to find the facts, declare the law, and [fol. 4941] enter a declaratory judgment accordingly. The jurisdiction of the court below and of this court having been rightfully invoked, we are compelled to decide the issue as to work-time without regard to what may be the result of an accounting between the parties. Courts should not consider the consequences of their legal decisions, except in trying to ascertain the legislative intent in enacting a statute of doubtful meaning; and, whatever may be said as to inferences from the facts, the law of this case is not doubtful. Moreover, no one can say at this time what will be the result of an accounting to be had in the future. We must limit our decision to the issues presented.

At the beginning of the shift the underground employees were required to report at the portal of the mine at a specified time, there to deposit their identification check at the tally office and to board the conveyance provided by the company for transportation to a man-unloading station inside the mine. The men rode in skips or ore cars, which were usually coated with grime of the mine, and assumed a crouched position to minimize the hazard of hitting their skulls against the low tunnel ceiling. Upon reaching the underground station the men left the skip and walked the remaining distance to their respective working places. They were obliged to exercise caution at all times to avoid contact with uninsulated electric wires and other hazards, and carried several pounds of equipment to be used in their work during the day. The men frequently were given instructions as to when and how they should perform their

respective duties before the skips left the portal of the mine, and at all times during the descent they were subject to company rules and under company control. The return to the portal at the end of the shift was accomplished in the same manner and under the same conditions.

[fol. 4942] After considering these and other facts of a similar nature, the court below found as a fact that all of the time thus consumed was work-time and should have been included in the computation of the employees' work-week.[3] Since this travel-time was spent on the employer's premises and subject to its directions, since it exacted mental and physical exertion from the employees under conditions both hazardous and unhealthful, and since it was a course of action pursued solely as a necessary incident to the prosecution of the employer's business, we are unable to say that this finding of the court below was clearly erroneous.

Appellants contend that the industrial history and contractual course of dealing between the parties showed conclusively that travel-time in these iron-ore mines was not working time. It may be conceded, *arguendo,* that for twenty-five years prior to 1938 iron-ore miners had not been compensated for travel-time, and that even after 1938 the parties to this suit had entered into contracts whereby it was agreed that no wages should be paid for travel-time; but the very purpose of the Fair Labor Standards Act was to eliminate labor conditions detrimental to the general welfare of workers, and the remedial machinery set up to accomplish that purpose regulated hours of work and rates of pay. Industrial custom does not warrant the continuation of abuses that the Act was created to rectify; and no contractual agreement that compensation should not be paid for travel-time is valid if in conflict with the Act. The record discloses that this agreement was not a simple statement of admitted fact, but was a compromise adjustment of real differences reached by way of negotiation and concession, and that the workers, though vainly, insisted upon their right to be paid for travel-time.

With respect to time spent by employees checking in and out, and procuring and returning tools, lamps, and carbide, [fol. 4943] the case stands differently. It apears that the workers were obliged to furnish their own tools, lamps, and carbide, and were free to exercise their own judgment as to

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[3] Tennessee Coal, Iron & R. Co. v. Muscoda Local No. 123 et al., 40 Fed. Supplement 4.

when, where, and how they should procure their equipment. The company merely instructed them as to the equipment needed, and did not attempt further to regulate the matter. The checking system used by appellants required the employees only to deposit a metal disc at the tally house when arriving for work, and to pick it up again at the end of the shift. In addition to the practical difficulties incident to the computation of isolated moments so elusive in character, we think these pursuits should not be computed as work-time, since they fall within the category of duties incident to qualifying the employee to perform his work rather than within the scope of his actual employment.

Applying Section 7 of the Act to the facts of this case, we hold that the time spent by underground mining employees of appellants, from the time they were required to report and did report for work at the portal of the mine until they returned to the portal of the mine at the end of the shift, less the regular lunch period when they were relieved of all duties, constituted working time comprising the work-week; that appellants have not compensated said employees for some of said working time; and that reference of the cause to a master for calculation of amounts due said employees was proper.

It is ordered that the judgment appealed from be; and the same hereby is, modified so as to conform to our holding as to work-time. As so modified, the judgment is affirmed; and the cause is remanded to the district court for further proceedings not inconsistent with this opinion.

[fol. 4944] SIBLEY, Circuit Judge, Dissenting:

The judgment about to be entered, in my opinion, misconstrues and misapplies the Fair Labor Standards Act, and visits on the appellants most unjustly a heavy pecuniary penalty; and if followed in other cases and by other courts will cause great confusion in the iron and coal mining industries at a time when the country can least afford confusion.

The Act does not define "work time" or even "work". It may apply to each and every industry. What would be work in one industry may not be in another. It seems to me that a man is at work, for the purposes of the Act, when he is doing what he is hired to do. It may involve mental or physical efforts, or it may consist in simple presence. It

all depends on the contract of hiring. The Act did not intend to upset and nullify the wage contracts of force in the various industries. It simply fixed minimum wages for work done under them, and maximum hours. Of course contracts yield to the Act on these points, but they still control as to the work to be done, and the way it is to be done, and as to the scale of pay if not less than the minimum fixed by the Act. These things are left to bargaining, and especially to collective bargaining under the principles of the National Labor Relations Act.

No question is older in such bargaining than the question whether "travel time" is to be included in "work time". The worker has always thought he ought not to lose all of the time necessary to go to and from his place of work; the employer has thought he ought not to pay for time that produces no work results. The dispute has been resolved in various ways in employment contracts for pay estimated by the hour. Plumbers demand and get pay from the time they leave their place of business to go to a job until they [fol. 4945] return. Railroad trainmen get pay from the time they report for duty, no matter what delay may occur in the starting of the train. Railway track-men also are paid from the hour of their assembly at the section point, though they may ride their motor car for miles before doing any track work. On the other hand carpenters, masons, and most artisans and laborers are paid for work only after they take up their tools on the job. As to coal and iron ore miners, traditionally they have been paid according to production, but their modern contracts have always included an express agreement as to their work time, and that agreement has excluded from work time the travel time in reaching the coal seam or ore bed, which were agreed to be the place of work. This is true of the collective bargains made by strong unions throughout the Appalachian region, as it is true of the bargains under which the miners in this case have worked.[1] Their work time is agreed to be that spent at the ore bed. The employers' arrangement to get them to that place reliably and safely is primarily for the

[1] On Sept. 18, 1933, the President approved a code for the Bituminous Coal Industry under the National Industrial Recovery Act which provided: "Seven hours of labor shall constitute a day's work and this means seven hours of work at the usual working places for all classes of labor

[fol. 4946] benefit of the miner and is not work for the employer, according to these agreements. The discomforts and dangers of the trip, as well as the loss of time, are all considered in fixing the rate of pay for the work of extracting the ore, and the pay scales here involved are far above the minimum fixed by the Act. The miner's work is hard and dangerous, but his pay is supposed to compensate for all this. If it would be better to include travel time in work time, it ought to be done by a new bargain in which rates of pay are also reviewed. If the change is to be by a special statute, (some western States have such statutes), it will operate justly *in futuro*, and not by unexpected penalty, as here.

There is nothing in the Act to outlaw agreements that travel time in getting to or from the agreed place of work is not work time. This is true though the employer may organize a means of transportation and make rules for

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exclusive of the lunch period, whether they be paid on the day, or the tonnage, or other piece work basis."

The Appalachian agreement, which was and is the basis of the Union contracts with the eastern coal mines contains the provision: "Seven hours of labor shall constitute a day's work. The seven hour day means seven hours work in the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or be paid on the tonnage basis."

Under these contracts "the usual working place" for miners has been universally understood to mean the face of the coal seam, and "travel time" to reach the seam is not "work time". The contracts and the practice have been of this sort since the eight hour day was established in 1898.

The contract between appellant Tennessee Coal and Iron Company and the union of its miners signed in October, 1938, Sect. 4, defined a day's work as eight hours, and a week's work or forty hours. "The eight hour day means eight hours of work in or about the mines at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid by the day or paid on the tonnage basis." As in coal mining, the usual working place of the miner has always been the face of the ore bed. The other appellants had more or less formal contracts to the same effect. Travel time has never been paid or expected under any of them.

its use. The agreements here that work time includes only time at the face of the ore bed are not illegal. Digging out the ore is what the miners agree to do, and for that they are paid. Getting their tools together and riding or walking to the agreed place of work is not, by force of any law, work done for the mine owner. No one, I suppose, would say that if a group of miners who had spent an hour riding to work decided of their own will not to dig any ore and spent another hour riding back, they had done any work for which they should be paid by force of the Act.

Though these miners are paid according to their production of ore, they may not under the Act be employed, that is, "suffered or permitted to work", longer than the maximum hours per week without increased pay. These mines provide against that by fixing the hours at which they admit the miners and require them to leave, and especially by limiting the hours during which power is furnished for [fol. 4947] their drills. Section 7 of the Act has not been violated in this case unless the travel time is counted as work time, contrary to the contracts of employment and contrary to the expectations of those concerned for the past four years. Identical provisions in the employment contracts of the coal miners were decided by the Administrator to be good under the Act, and his conclusion was published, and thought applicable to the contracts here involved, until recently another position was taken as to iron mines.

It is now proposed to assess against these appellants as back pay for overtime an estimated quarter of a million dollars, to be doubled by way of penalty, to compensate the miners for their time in going to and from their place of work, in the face of their agreements that this time was not in their work time. They are to get three times as much per hour for riding and walking to and from the work they were hired to do, as they get for doing the work itself. The injustice of it to me is shocking.

If the decision stands and is followed, chaotic conditions will ensue, and this is good ground to believe that Congress intended no such thing. If for travel time triple back pay is due by these mines, it is due by all the iron mines having similar wage agreements. Many will go broke, or have to cease operations, causing a loss of jobs to their men. The new mines are not deep, and travel time is negligible, but one of the mines here involved is old and extensive, and the travel time is about one and a half hours

per day. This is nearly a quarter of the present work day of seven hours. If that time is to be unproductive, but as costly as the production time, this mine can hardly survive. The wage scales for each mine everywhere will have to be renegotiated to adjust business for the future to the new conditions, with the risk of discontents and strikes.

[fol. 4948] The decision will have to be applied also to the coal mines. Coal and iron ore occur in similar beds, and are mined in the same general way. In both, the old mines have the same difficulties. The collective agreements made by strong unions throughout the Appalachian country all contain the provision as to worktime we are now dealing with. When the Administrator first proposed to contend for what this court is about to do, it was the unions who objected most cogently, and successfully. The letter of the Legal Director of United Mine Workers of America[2] to the Administrator which appears in this record is a very strong argument against the invalidating of the agreements. That argument prevailed then. It ought to prevail now, for it applies as exactly to the iron ore workers as it did to the coal miners. The chaos predicted for the latter will come to both if the Act is so interpreted as to invalidate all these agreements.

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[2] Letter of Earl E. Houck to Philip B. Fleming, Administrator, dated July 9, 1940. That letter states, among other things: "Travel time was never considered as a part of the agreement or obligation of the employer to pay for in this industry, nor as hours worked by the employees, and this has been the case since the eight-hour day was established in the industry—April 1, 1898. It is urged that any ruling requiring such a change in the custom, tradition, and contract provision so as to change the work day from 'seven hours' work in the mines at the usual working places' to any new standard for the measurement of time worked, and to the adjustment of wage rates made necessary thereby, would create so much confusion in the bituminous industry as to result in complete chaos, and would probably result in a complete stoppage of work at practically all of the coal mines in the United States."

[fol. 4949] JUDGMENT

Extract from the Minutes of March 16th, 1943

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY

versus

MUSCODA LOCAL No. 123, etc., et al.

SLOSS-SHEFFIELD STEEL & IRON COMPANY

versus

SLOSS RED ORE LOCAL No. 109, etc., et al.

REPUBLIC STEEL CORPORATION

versus

RAIMUND LOCAL No. 121, etc., et al.

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Alabama, and was argued by counsel;

On consideration whereof, It is now here ordered and adjudged by this Court, that the judgment of the said District Court appealed from in this cause be, and the same hereby is, modified so as to conform to our holding as to work-time; and as so modified, that said judgment be, and it is hereby, affirmed; and the cause is remanded to the said District Court for further proceedings not inconsistent with the opinion of this Court;

It is further ordered and adjudged that the appellants, Tennessee Coal, Iron & Railroad Company, and the sureties on the appeal bond herein, Borden Burr and A. Benners; Sloss-Sheffield Steel & Iron Company, and the sureties on the appeal bond herein, E. L. All and W. B. White, and Republic Steel Corporation, and the sureties on the appeal [fol. 4950] bond herein, Borden Burr and A. Benners, be condemned, in solido, to pay the costs of this cause in this Court, for all of which execution may be issued out of the said District Court.

"Sibley, Circuit Judge, dissents."

[fols. 4951-4995] PETITION FOR REHEARING—Filed April 5, 1943

IN

United States Circuit Court of Appeals

FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY,
Appellant

vs.

MUSCODA LOCAL NO. 123, ETC., ET AL
Appellees

SLOSS-SHEFFIELD STEEL & IRON COMPANY,
Appellant

vs.

SLOSS RED ORE LOCAL NO. 109, ETC., ET AL
Appellees

REPUBLIC STEEL CORPORATION,
Appellant

vs.

RAIMUND LOCAL NO. 121, ETC., ET AL
Appellees

APPEALS ON A CONSOLIDATED RECORD FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF ALABAMA

APPELLANTS' PETITION FOR REHEARING

Now come the appellants, and each of them, separately and severally, and petition the Court to grant a rehearing in this cause, to set aside the judgment of affirmance heretofore rendered by it on March 16, 1943 and to enter a judgment reversing the judgment of the

District Court and declaring that the work-time of the appellants' underground employees means time spent in actual work at their usual working places underground, exclusive of time spent by them in waiting for transportation, being transported and walking from the portal of the mine to such working places and in returning to the portal at the end of the shift, and for grounds of this petition, assign the following:

In presenting this petition for rehearing, appellants feel justified in calling to the Court's attention occurrences (to which judicial notice is requested [1]) which have taken place since the submission of the case. These occurrences, together with the national impact of the decision, its repercussions and probable consequences and our sincere conviction that it is erroneous, impel us to give to the presentment of the petition our best and most conscientious effort, and to request of this Court the careful and patient consideration which it always gives to matter before it.

The transcript of the record is lengthy and complex, and it may be that we have overlooked bringing to the Court's attention matters that might have changed its views.

The enforcement of the judgment in its present form will not only heavily penalize the appellants and, contrary to custom and understanding that had existed for generations, greatly increase the earnings of all of the appellants' underground employees beyond the amount they expected and contracted to receive and have re-

[1] Oetjen v. Central Leather Company (1918), 246 U. S. 297, at page 301.

ceived and receipted for, but will bestow these unearned increments on many of the employees to whom the stated basic reasons for the decision have no application. The judgment not only fails to declare the law as applicable to time after May 1, 1941 (as to which the jurisdiction of the Court was properly invoked), but it adjudicates matters not embraced in either the pleadings or proof, and as to which appellants (although a contrary agreement was reached in the Court below and approved by order of the Court) have never had a day in court.

As grounds for the petition, the following are assigned, separately and severally:

I

The Court was in error in affirming the judgment appealed from.

II

The Court was in error in holding that:

"Applying Section 7 of the Act to the facts of this case, we hold that the time spent by underground mining employees of appellants, from the time they were required to report and did report for work at the portal of the mine until they returned to the portal of the mine at the end of the shift, less the regular lunch period when they were relieved of all duties, constituted working time comprising the work-week; that appellants have not compensated said employees for some of said working time; and that reference of the cause to a master for calcula-

tion of amounts due said employees was proper.

"It is ordered that the judgment appealed from be, and the same hereby is, modified so as to conform to our holding as to work-time. As so modified, the judgment is affirmed; and the cause is remanded to the district court for further proceedings not inconsistent with this opinion."

III

APPELLANTS RESPECTFULLY SUBMIT THAT THE COURT WAS IN ERROR IN HOLDING THAT THE USE BY THE CONGRESS OF THE WORD "WORKWEEK" IN SECTION 7 OF THE ACT WAS WITHOUT "DOUBTFUL MEANING," AND THAT, FOR THIS REASON, IT COULD NOT CONSIDER THE "CONSEQUENCES" OF THE COURT'S DECISION NOR USE THE WELL-ESTABLISHED RULES OF STATUTORY CONSTRUCTION IN ORDER TO ASCERTAIN THE LEGISLATURE INTENT IN THE ENACTMENT OF STATUTES OF "DOUBTFUL MEANING."

It is well settled that where there is any doubt or ambiguity in the language of a statute with respect to the meaning of the words used or their application, the courts, in order to ascertain the legislative intent, will apply the established rules of judicial construction (Tennessee Coal, Iron & Railroad Company Brief, pages 153 to 168; Sloss-Sheffield Steel & Iron Company Brief, pages 77 to 107).

WE ASSERT THAT THE APPLICATION HERE OF ANY ONE OR ALL THESE RULES OF CONSTRUCTION WILL MAKE IT DEFINITE THAT THE CONGRESS IN THE USE OF THE LANGUAGE UNDER CONSTRUCTION INTENDED TO EXCLUDE TRAVELING TIME FROM THE "WORKWEEK."

The Court in its opinion uses the following language:

> "Courts should not consider the consequences of their legal decisions, except in trying to ascertain the legislative intent *in enacting a statute of doubtful meaning,*[2] and, whatever may be said as to inferences from the facts, *the law of this case is not doubtful.*"—(Page 4 of the Opinion).

Appellants agree that the Court was correct in holding that "the courts should not consider the consequences of their legal decisions, except in trying to ascertain the legislative intent in enacting a statute of *doubtful meaning,*" but appellants insist that the Court was incorrect in holding that "whatever may be said as to the inferences from the facts, the law of this case is not doubtful."

The question involved in this case is the ascertainment of the intent of the Congress in the use of the word "workweek" in Section 7 of the Act as applicable to the iron ore industry and, particularly, to the iron ore mining operations of appellants.

The Court is correct in stating that "The Act was drafted for application on a national scale."

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[2] Italics and emphasis herein, unless otherwise indicated, are ours.

The Opinion overlooks the fact that it was drafted not only on national scale, but with full recognition of the fact that it was drafted for application on a nation-wide industry basis. (Tennessee Coal, Iron and Railroad Company Brief, pages 142 to 145).

The undisputed evidence shows that the iron ore industry is a separate industry. It is a national industry. It is not a part of the non-ferrous metal mining industry. This fact has been additionally demonstrated by the rulings of the various departments of the Government made since the submission of this case.*

The Opinion holds that the use of the word "workweek" in application to the underground employees of these appellants is not of "doubtful meaning."

Appellants respectfully submit that those charged with the administration and enforcement of the Act, and the national iron ore mining industry, including all employers and employees, either reached a conclusion as to the intent of the Congress in the use of the word "workweek" in Section 7 of the Act opposite to the conclusion of the Court in this case, or expressly stated

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* The Government in various ways and at various times has designated and recognized the *non-ferrous* mining industry as one separate and apart from the ferrous mining industry.

The President's 48 hour week Executive Order, issued on February 9, 1943, authorized the designation of critical areas and designated industries to be subject to the Order. General Order No. 6 issued under this Executive Order designated the *non-ferrous mining industry* as subject to the Executive Order.

The War Labor Board has recently set up a special commission to consider wages and production of the *non-ferrous* mines.

Thus the government recognizes that the ferrous mining industry is separate and apart from the non-ferrous mining industry in harmony with this record and in support of our contention that the Administrator, while right in using a national industry measuring rod, was wrong in using one applicable only to the non-ferrous mining industry.

that the intent of the Congress in the use of the word "workweek" was doubtfully expressed.

The foregoing assertion is supported by the following uncontradicted facts:

(a) From October 24, 1938 until March, 1941, the long established practice by custom and contract of not paying for traveling time was recognized by those charged with the administration of the Act and its enforcement and by employers and employees, the undisputed evidence showing that for two and one-half years after the enactment of the Act correctness of the face to face basis of computation and payment of wages and the exclusion of traveling time as work time *was never questioned.*

(b) On July 27, 1940, the Administrator announced that the "practice of computing working time on a face to face basis in the bitiminous coal mining industry would not be unreasonable." . . . "The term 'face to face' means the productive work performed *after the miner arrives at his usual working place, excluding the time spent in traveling* from the portal or entrance of the mine to the place of work and the time spent in returning from the working place to the portal in the evening." . . . This determination "should not be considered to apply to any mining operations where the practice of computing hours of work differs from the custom in the Bituminous coal mining industry" (Record, Volume VII, pages 4716-4717).

Since the undisputed evidence in this case shows that the traditional practice of computing hours in the iron

ore mines was and had for generations been exactly similar to "the custom in the Bituminous coal mining industry" and since this was known to all interested parties, including employers and employees, it is impossible to consider this interpretation as anything except a mandate from the Administrator that this established custom could continue without fear of administrative action to the contrary.

On September 18, 1940, the Administrator again announced the same interpretation, and again assured the iron ore industry that this traditional practice of computing hours by excluding traveling time was in keeping with the administrative interpretation of the Act. (Record, Vol. VII, p. 4717).

(c) The Administrator in announcing the interpretation in reference to the metal mining industry stated in substance that the problem was so difficult of solution and he had been so long delayed in making interpretation (more than two and one-half years since the effective date of the Act) that, so far as the Administration of the Act was concerned, full forgiveness for the past was given (Record, Volume I, page 79).

The Administrator was correct in realizing the necessity for a national measuring rod; he was wrong in joining the iron ore mining industry to the non-ferrous metal mining industry. It was only by this improper union that he was able to find any facts to support his conclusion that the "portal to portal" custom was in existence prior to the enactment of the Act.

(d) In April, 1941, after the effective date of his in-

terpretation, the Administrator again in a public statement expressed grave doubts in reference to the ruling and admitted the difficulties and complexities that confronted him in finally reaching his conclusion (Record, Volume VII, pages 4726-4733).

(e) Appellants and appellees and all other employers and employees in the iron ore industry, after the enactment of the Act both prior and subsequent to the promulgation of the Administrator's opinion "practically construed" the Act as excluding traveling time from work time. All the employers and employees in the iron ore mining industry until May 1, 1941 (when under compulsion compliance was made with the Administrator's ruling) understood and treated the word "workweek" as having been used by the Congress in keeping with and recognition of traditional customs and contracts.

APPELLANTS ASSERT THAT THE UNDISPUTED EVIDENCE IN THIS CASE SHOWS THAT UNTIL THE ISSUANCE OF THE ADMINISTRATOR'S OPINION IN MARCH, 1941, ALL PERSONS CONNECTED IN ANY WAY WITH THE IRON ORE MINING INDUSTRY OR WITH THE ADMINISTRATION OF THE ACT IN ITS APPLICATION TO THE IRON ORE MINING INDUSTRY IN GOOD FAITH AND BY PRECEPT AND EXAMPLE BELIEVED, AND ACTED UPON THE BELIEF, THAT THE CONGRESS DID NOT INTEND BY THE USE OF THE WORD "WORKWEEK" IN SECTION 7 OF THE ACT TO IN-

CLUDE TRAVEL TIME AS WORK TIME. INCLUDED IN THIS BELIEF AND ACTION THEREON WERE ALL EMPLOYEES OPERATING UNDERGROUND IRON ONE AND COAL MINES, ALL THEIR UNDERGROUND EMPLOYEES AND ALL PERSONS CHARGED WITH THE ADMINISTRATION AND ENFORCEMENT OF THE ACT.

IV

THE COURT, WAS IN ERROR IN STATING IN ITS OPINION THAT:

> "THE ACT WAS DRAFTED FOR APPLICATION ON A *NATIONAL SCALE,* AND IT DOES NOT UNDERTAKE TO DEFINE WHAT IS WORKING TIME IN ANY PARTICULAR INDUSTRY OR CLASS OF INDUSTRIES. WHAT CONSTITUTES WORKING TIME IS A QUESTION OF FACT DEPENDING UPON THE PARTICULAR CIRCUMSTANCES, AND IS A MATTER FOR THE DETERMINATION OF THE COURTS IN CONTROVERTED CASES. IN THE GREAT MAJORITY OF INSTANCES NO QUESTION OF THIS NATURE WILL ARISE, *BUT IN DOUBTFUL CASES* SUCH AS THIS THE ISSUE MUST BE DETERMINED IN ACCORDANCE WITH COMMON SENSE AND THE *GENERAL CONCEPT OF WORK OR EMPLOYMENT;* AND, AS IN OTHER CASES THE APPELLATE COURT IS CONTROLLED BY THE RULE THAT THE FINDING OF

THE TRIAL COURT UPON DECISIVE QUESTIONS OF FACT MUST BE UPHELD UNLESS IT IS CLEARLY ERRONEOUS." (Page 3 of Opinion).

The Act, as stated by the Court, "was drafted for application on a National (industry) scale and it does not undertake to define what is working time in any particular industry or class of industries."

An administrator was provided for with authority to make rules, regulations and interpretations, and while his interpretations are subject to judicial review the difficulties and expense of review in many cases make his opinions, from a practical standpoint final.

The Act provides, and has been so construed and administered, for the grouping of industries with appropriate regard to established customs and contractual relationship between employers and employees in the various industries.

The Administrator has consistently (until the rendition of the judgment appealed from) followed these provisions of the Act and has fully recognized that long existing customs and contractual relationships in a particular industry evidencing "the general conception of work or employment" in such industry (on the part of those in a position to know best and who have most interest in the matter) were not intended by the provisions of the Act to be set aside.

If this were not so—if a local instead of an established national measuring rod is used—the inevitable result of determining in each individual case the "general con-

cept of work'' would lead to many conflicting conclusions that would promote ''unfair competition'' instead of preventing it. For illustration, one court could conclude that the perils or discomforts in traveling to the work place in an underground mine were of a kind that made the traveling ''work'' while another Court (or the Administrator) could conclude that traveling time in a competing mine under exactly similar conditions was not work. The opportunities afforded by such a construction will not only bring about uncertainty and chaos in any industry but the extension of the principle will lead (as has already occurred, page —, infra) administrators to determine that traveling time is work time in a lumber plant, an open pit mine, an enclosed manufacturing plant or any other single operation, notwithstanding in the industry to which the operation belongs custom and contracts for generations have been to the contrary.

It is submitted that there can be but one ''general conception of work'' in an industry. The application of the Courts formula would result in as many and divergent ''conceptions'' of ''work'' as *might* be reached by the various administrators and Courts considering the facts applicable to the different members of the industry.

It is stated in the above quoted portion of the Opinion that is this case ''as in other cases, the appellate court is controlled by the rule that the finding of the trial court upon decisive questions of fact must be upheld unless it is clearly erroneous.''

The finding of the Court below that all of the time consumed in travel was worktime and should have been included in computation of the employee's workweek is not a finding of fact. It is rather a conclusion of law; or, at most, a determination of a mixed question of law and fact such as is subject to review by the appellate court upon which review the appellate court may substitute its judgment for that of the lower court. *Helvering v. Tex-Pen Oil Co.*, 300 U. S. 481, 491; *Bank of Waterproof v. Fidelity and Deposit Co.*, 299 Fed. 478; *Border Gas Co. v. Windrow*, 3 F. (2d) 974. It is well established that ultimate findings of fact are to be distinguished from findings of primary, evidentiary or circumstantial facts. The ultimate finding is either a conclusion of law, or, at least, a determination of a mixed question of law and fact.

Not only is this true, but, as we have previously noted the facts in relation to the fundamental question here involved are without dispute.

V

The Court was in error in stating in its opinion that:

"APPELLANTS CONTEND THAT THE INDUSTRIAL HISTORY AND CONTRACTUAL COURSE OF DEALING BETWEEN THE PARTIES SHOWED CONCLUSIVELY THAT TRAVEL TIME IN THESE IRON ORE MINES WAS NOT WORKING TIME. IT MAY BE CONCEDED, *ARGUENDO*, THAT FOR 25 YEARS PRIOR TO 1938 IRON ORE MINERS

HAD NOT BEEN COMPENSATED FOR TRAVEL TIME, AND THAT EVEN AFTER 1938 THE PARTIES TO THIS SUIT HAD ENTERED INTO CONTRACTS WHEREBY IT WAS AGREED THAT NO WAGES SHOULD BE PAID FOR TRAVEL TIME; BUT THE VERY PURPOSE OF THE FAIR LABOR STANDARDS ACT WAS TO ELIMINATE LABOR CONDITIONS DETRIMENTAL TO THE GENERAL WELFARE OF WORKERS, AND THE REMEDIAL MACHINERY SET UP TO ACCOMPLISH THAT PURPOSE REGULATED HOURS OF WORK AND RATES OF PAY. INDUSTRIAL CUSTOM DOES NOT WARRANT THE CONTINUATION OF ABUSES THAT THE ACT WAS CREATED TO RECTIFY; AND NO CONTRACTUAL AGREEMENT THAT COMPENSATION SHOULD NOT BE PAID FOR TRAVEL TIME IS VALID IF IN CONFLICT WITH THE ACT. THE RECORD DISCLOSES THAT THIS AGREEMENT WAS NOT A SIMPLE STATEMENT OF ADMITTED FACT, BUT WAS A COMPROMISE ADJUSTMENT OF REAL DIFFERENCES REACHED BY WAY OF NEGOTIATION AND CONCESSION, AND THAT THE WORKERS, THOUGH VAINLY, INSISTED UPON THEIR RIGHT TO BE PAID FOR TRAVEL TIME." (Opinion, Page 5).

Appellants respectfully submit that the Court was in error in the above findings and conclusions.

THE FACTS "CONCEDED, *ARGUENDO*" ARE PROVEN WITHOUT CONFLICT BY THE UNDISPUTED EVIDENCE IN THE CASE.

The finding that "the record discloses that this agreement was not a simple statement of admitted fact, but was a compromise adjustment of real differences reached by way of negotiation and concession, and that the workers, though vainly, insisted upon their right to be paid for travel time" is, we respectfully insist, in conflict with the undisputed evidence.

Since mining has been an industry in Alabama (both iron ore and coal) wages have been contracted for, paid, received and receipted for with travel time excluded as work time. On October 19, *1933, for the first time,* the Union requested the including in the pay of *one-half the traveling time* (Record, page 3592-3). This request was repeated on April 13, 1934 (Record, page 3594. TCI Exhibit 6), and on June 13, 1935 (Record, Volume V, page 3623). On no occasion have the workers requested payment for *all* of the traveling time and they have never *insisted* upon their request to be paid one-half of the traveling time. The last time the Union *requested* payment for one-half the traveling time was *June 13, 1935.*

On *May 26, 1936* the Union presented a proposed contract which in their own language *expressly excluded* traveling time (TCI Exhibit 10-A, Volume V, 3629), and after this time wages continued to be paid, increased wages to be negotiated and received, jobs to be evaluated, money to be received, and written contracts to be negotiated by their General Counsel and top officials with express agreements defining the workday as exclusive of traveling time.

We respectfully insist that the above-quoted conclusions of law (and they constitute the *bedrock* of the decision) are erroneous.

The Court calls attention to the dangers of low roof, uninsulated wires, discomforts of uncomfortable travelways, etc., and states, in effect, that it was the purpose of the Fair Labor Standards Act to eliminate these and similar "labor conditions detrimental to the general welfare of the employees." We submit that there is not a word in the Act, in the discussions before the committees of the Congress, or in the debates in either House of the Congress to justify this conclusion (pages 24 to 26 of appellants' reply brief).

There exist many industries in the United States where the conditions of employment are much more detrimental to the general welfare of workers than in the underground iron ore mines. Some of these conditions are incident to the character of the work. It is impossible to make a coal mine as safe as an iron ore mine. The evidence in this case shows that fatalities and injuries are much more prevalent in gold mines than in coal mines and in coal than iron ore mines, and in some of the ore mines than in others. The same differences exist as to comfort or the incidental handling of tools. It is common knowledge that one of the most dangerous industries is that of driving tunnels, subways and underground passage ways; probably the one most offensive to the senses is working in or in the vicinity of glue factories or fertilizer plants where dead animals are used for fertilizer manufacture. In underground mines the

presence of silica, water, gas, steep grades, and other natural physical conditions add to the danger and discomfort.

The same differences in conditions that exist in and about the conditions of work in these various occupations often exist in going to and from the places of work. It is inconceivable that this Act can be construed as having the purpose of preventing or diminishing these various unsafe or uncomfortable conditions of employment. Just as the evidence discloses in this case that these conditions become a part of the wage scale, so it may be assumed in all these various occupations the scale of wages is fixed upon these conditions.

It is submitted that, if traveling to or from work or waiting at the man loading station for transportation is such a dangerous or uncomfortable condition as to constitute it actual work on the theory that the Congress intended "to rectify" or "regulate" such or similar conditions, then the lunch period, under substantially the same conditions, was also intended by the Congress to constitute work time.

If the Act was intended "to eliminate labor conditions detrimental to the general welfare of workers" and to "rectify the abuses" referred to in the Opinion, then this intention could not be confined to the conditions relating to traveling and waiting for transportation at the man loading station, but would necessarily apply to the conditions of employment and the actual work at the employees' "regular working places in the depths of the mine."

The evidence discloses that the dangers and discomforts are much greater at the regular working places than along the traveling-ways or at the places provided for waiting for transportation. If the Act was designed, as asserted in the Opinion, to "eliminate" or "rectify" the conditions of employment referred to, it might of necessity have been intended by the Congress to apply to regular actual work at the working places during the normal hours of work, as well as to the places incident to traveling and waiting for transportation.

If it had been the purpose of the Congress, as found by the Court in its opinion, to rectify and regulate these conditions, it surely would have provided a remedy. The record shows that the institution of the "portal to portal" carried no remedy; it made no change in the perils; in the means or methods of conveyance; in the ventilation; in the hazards from uninsulated wires; in steepness of the grades, or in any of the various conditions. Instead of rectifying or minimizing these conditions it furnished the temptation to increase them. It made no change except to require pay for the traveling time. The employer, being deprived of almost one-third of the productive time of his employees will be tempted to speed up his transportation, and the evidence in this case shows that the transportation has been speeded up. Speed surely does not add to safety. If the employers are required to pay the employees for the time they are *waiting for transportation* at the man loading station or because of the occasional carrying of tools, the temptation is to shorten the period spent in waiting on the

benches at the underground station and to add to the carrying of tools and the performance of labor. The undisputed proof in this case shows that since the institution of "portal to portal" the perils and discomforts have remained substantially the same.

The evidence produced by appellees of injuries received while riding on the skips occurred after May 1, 1941.

The record discloses that the giving of instructions, the incidental carrying and use of tools (the only matters aside from peril and discomfort, referred to by the Court as the basis of its conclusion) are equally as variant.

Not only is this true, but the decision expressly holds that "these pursuits (when performed on the surface) should not be computed as work time, since they fall within the category of duties incident to qualifying the employee to perform his work rather than within the scope of his actual employment" and because of the "practical difficulties incident to their computation" (Page 6, Opinion).

The fact that these same "pursuits" occur *underground* adds no additional characteristics of work, but the practical difficulties of their computation as shown by this record become much more difficult. The men are unaccompanied by their bosses to and from their places of work (they will receive under "portal to portal" the same rate of pay for traveling as they do for working) and the speed of their going and their activities on the way depend on their own initiative.

This part of the decision as to these "pursuits" on the

surface not being work is not only correct in principle, but it necessarily abolishes the contention of appellees and the view of the District Judge that "work" as used in the statute is a synonym for "employment" and therefore that the decisions construing workmen's compensation acts as covering injuries received while going to work become applicable here.

An employee, if hurt on the surface while getting his tools or performing any of these "pursuits" is undoubtedly entitled to compensation under the Compensation Act, but, as held by the Court in this part of its decision, he is not engaged in "work" under the provisions of the Act (Appellant's Reply Brief, pages 247-248).

It is respectfully submitted that it was the sole purpose of the Act to regulate minimum wages and maximum hours. It was not intended to police the many industries for hazards and discomforts. It sought by the imposition of economic standards to prevent unfair competition in commerce by the elimination of labor conditions detrimental to the maintenance of a "minimum standard of living." The term "standard of living" (as admittedly applied to the Act) is a phrase of economic import and, as shown by the decisions of the courts and by the debates in the Congress, has a definite meaning which relates, not to conditions of employment, but to the question as to whether the wages which are being received are sufficient to enable the employees to enjoy a decent "standard of living." The Act contains no provision respecting conditions of work or labor environment, such as comforts, sanitation, con-

veniences of working places, existence of perils (Appellants' Reply Brief, pages 24-25).

The Court is in error in holding that the Act was intended to eliminate or rectify these conditions of employment. The payment of the minimum wage provided in the Act and the payment of overtime was not intended to and does not serve to "eliminate" or "rectify" conditions of employment. The institution of "portal to portal" leaves the labor environment unchanged and, as stated above, gives the opportunity of making conditions worse. "Conditions detrimental to the general welfare of workers" which are designed to be eliminated or rectified by this Act are only those conditions which can be bettered by increased compensation for work providing for a maintenance of a "decent standard of living."

VI

THE OPINION AND JUDGMENT OF THE COURT ARE ERRONEOUS BECAUSE THEY DISREGARD THE UNDISPUTED EVIDENCE WHICH SHOWS, WITHOUT CONFLICT, THAT AT THE TIME OF THE ENACTMENT OF THE ACT THE IRON ORE INDUSTRY WAS A NATIONAL INDUSTRY; THE EXCLUSION OF PAY FOR TRAVELING TIME HAD, FOR GENERATIONS, BEEN THE ESTABLISHED CUSTOM; THIS CUSTOM HAD BEEN EMBODIED IN CONTRACTS, AND WAS THE RECOGNNIZED "GENERAL CONCEPT OF WORK" AS UNDERSTOOD BY ALL PARTIES. THESE CONDITIONS MUST

BE ASSUMED TO HAVE BEEN WITHIN THE KNOWLEDGE OF THE CONGRESS AT THE TIME OF THE ENACTMENT OF THE ACT.

VII

THE OPINION AND JUDGMENT OF THE COURT ARE ERRONEOUS BECAUSE THEY DISREGARD THE UNDISPUTED EVIDENCE WHICH SHOWS, WITHOUT CONFLICT, THAT FOR MANY YEARS PRIOR TO THE ENACTMENT OF THE ACT OFFICIALS CHARGED WITH THE ADMINISTRATION AND ENFORCEMENT OF STATUTES CONTAINING WORDS OF SUBSTANTIALLY SIMILAR IMPORT CONSTRUED THE LANGUAGE OF SUCH STATUTES AS EXCLUDING TRAVELING TIME FROM WORK TIME:[3] AND THE NATIONAL INDUSTRIAL RECOVERY ACT, THE PROGENITOR OF THIS ACT, ON SEPTEMBER 18, 1933, HAD BEEN EXPRESSLY CONSTRUED BY THE ADMINISTRATOR AND THE PRESIDENT AS EXCLUDING TRAVELING TIME.[4]

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[3] Plaintiffs' Exhibit No. 16, Record, Vol. VII, p. 4646; Plaintiffs' Exhibit No. 17, Vol. VII, p. 4654; Plaintiffs' Exhibit No. 18, Vol. VII, p. 4658; Plaintiffs' Exhibit No. 19, Vol. VII, p. 4661; Plaintiffs' Exhibit No. 20, Vol. VII, p. 4662; Plaintiffs' Exhibit No. 45, Vol. VII, p. 4669; Plaintiffs' Exhibit No. 32, Vol. VII, p. 4693 (United States Fuel Administrator); Plaintiffs' Ex No. 46, Vol. VII, p. 4696 (President Woodrow Wilson).

[4] Dissenting Opinion, p. 8; Plaintiffs' Exhibit No. 14, Vol. VII, p. 4700; Plaintiffs' Exhibits No. 30-55, Vol. VII, p. 4786 (President Franklin D. Roosevelt).

VIII

THE OPINION AND JUDGMENT OF THE COURT ARE ERRONEOUS BECAUSE THEY DISREGARD THE UNDISPUTED EVIDENCE WHICH SHOWS THAT SUBSEQUENT TO THE ENACTMENT OF THE ACT THE ADMINISTRATOR (UNTIL MARCH, 1941), THE NATIONAL IRON ORE INDUSTRY AND THE EMPLOYEES THEREOF (UNTIL MAY, 1941) AND (UNTIL THE HANDING DOWN OF THIS DECISION) THE NATIONAL COAL MINING INDUSTRY AND THE EMPLOYEES THEREOF AND THE ADMINISTRATOR[5] CONTINUED WITHOUT QUESTION TO FOLLOW THE ESTABLISHED CUSTOM, THE CONTRACTUAL AGREEMENTS AND THE GENERAL "CONCEPT OF WORK" WHICH HAD EXISTED FOR GENERATIONS AND WHICH EXCLUDED TRAVELING TIME FROM "WORK TIME."

In the dissenting opinion there is found the following statement:

> "The decision will have to be applied to the coal mines. Coal and iron ore occur in similar beds and are mined in the same general way. * * * That argument (the one made by the joint letter of the Bituminous Coal Mine Operators and the Union) prevailed then. It ought to prevail now, because it

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[5] The Administrator followed the joint request presented by the Houck letter, containing unanswerable argument against the Court's construction. —(Record, Vol. VII, pp. 4710-15; Dissenting Opinion, p. 11).

applies as exactly to the iron ore workers as it did to the coal miners. The chaos predicted for the latter will come to both if the Act is so interpreted as to invalidate all the agreements." (Page 11 of the Opinion).

This statement supports the contention made by the appellants on the trial below and in this Court.—(TCI Brief, pp. 97 to 115; Sloss Brief, pp. 66-71).

Occurrences which have happened since the rendition of this decision, and which are of such common and general knowledge as to justify the Court in taking judicial notice thereof indicate the severe consequences which have and will follow the decision, and the present national unrest and uncertainty that has resulted from it.

On March 19, 1943, the International Policy Committee of the United Mine Workers of America, in submitting their "demands for wage scale increases and corrections of mining practices" for the Bituminous Coal Industry, included the following:

"HOURS OF LABOR: That the maximum hours and working time provisions of the joint wage agreement, including the supplemental agreements regarding the six-day week, be reaffirmed with the following modifications:

"(a) The six-day week to terminate when the war emergency ends.

"(b) To conform with the *basic legal requirement* for the industry, the maximum hours and working time provisions be amended to *establish portal to portal for starting and quitting time for all underground workers.*"

These demands are now under consideration in the conferences being held between representatives of the Union and the Bituminous Coal Operators in the Appalachian and Southern fields in an effort to agree upon a contract to become effective upon the expiration on April 1, 1943, of the existing contracts which specifically (as has been the case since 1898) define the workday on the "face to face" basis.

In discussing the Union's demands for "portal to portal," Mr. John L. Lewis, the spokesman for the Union, stated that the men are underground on an average of about eight and one-half hours, and that now the mine workers *desire to take advantage of the law,* which (under this decision) grants the right to be paid for the time they are in the mines.

In the Supplement to Wage and Hour Reporter, March 22, 1943, Volume 6, Number 12, the text reads as follows:

> "Ruling on a question magnified by the pending wage negotiations in the coal mining industry, a Circuit Court of Appeals upholds in a split decision the 'portal to portal' method of computing hours of work for the purposes of the Fair Labor Standards Act in underground iron mines. The ruling is susceptible of far-reaching implications both in iron mines and coal mines, where *the prevailing practice* is to consider the miner's workday as beginning when he reaches the face of the mines on which he is working and ending when he leaves it."

The following quotations are from the Union's official paper:

"The UMWA is now negotiating with mine owners of the United States for a substantial wage increase for coal mines. The miners base their claim for more pay on the rise in living cost and, also, on the fact that miners are required to spend from one to two hours daily in traveling inside the mine to and from their working places.

* * *

"As a means of increasing pay, 'travel time' or the time spent by the miners in traveling from the top of the shaft to the face of the coal should be paid for—*the contention recently upheld in the United States Circuit Court of Appeals for Red Ore mines in the Birmingham District.*"

"A study of sixty mines producing 80 per cent of the tonnage in one area showed an average of one hour and 48 minutes in travel underground to and from the working place, making a total underground time of eight hours, 48 minutes, for a seven-hour work shift or nearly 53 hours for a six-day forty-hour week and that a recent court decision (this decision) barred 'the Union from making a new contract on the long-established 'face to face' working shift basis.''

On March 26, 1943 Mr. Lewis, appearing as a witness before the Senate Committee investigating the national defense program said:

"MR. LEWIS: I wonder what you would suggest, Senator, you having a very alert, capable mind on these things, in the light of the decision of the Fifth Circuit Court of Appeals on the portal to portal issue, that the mine workers should do. *The court says that we cannot make a contract and con-*

tract away the rights conveyed by the statute. The coal operators and the War Labor Board say they won't pay for it. *I am judicially estopped from making an agreement that doesn't comply with the mandate of the court.*"

On March 30, 1942, the following comment appeared in the columns of a nationally known commentator:

"BREAK FOR LEWIS:

"The next good break Lewis got was in the recent Circuit Court of Appeals declaratory judgment in which Tennessee Coal and Iron was ordered to pay members of the Mine, Mill and Smelter Workers' Union for all time workmen are underground. Coal miners are not now paid on this 'portal to portal' basis from the time they enter the mine to the time they leave.

"Instead, they are paid for the time at work at the bottom of the mine. But here is a Federal Court decision which sets a *major precedent and compels employers* to pay all miners for a longer work day, or else shorten the time actually spent at work."

It must be admitted as a matter of general and common knowledge that this decision is universally regarded as requiring compensation for traveling time in the underground coal mines of the United States, and as a probable "deus ex machina" for starting the spiral of inflation.

It is true that the operators of and employees in underground coal mines are not parties to this particular suit. It is equally true, under the undisputed offered

evidence that at the time of the enactment of the Act, for years prior thereto and up to and including the present, and by reason of the conditions of nature for all time in the future, the only differences between the conditions in coal mines and iron ore mines are those of magnitude and degree and that in these differences the working places in the coal mines are at greater distances from the portal, and transportation to and from is attended with greater discomforts and hazards.

IF THIS DECISION STANDS, IT MUST BE ADMITTED THAT, IF IT WAS THE INTENT OF THE CONGRESS TO OVERTURN PRACTICES AND CONTRACTS IN THE IRON ORE MINES, IT WAS ALSO ITS INTENT TO OVERTURN THEM IN THE COAL MINES.

When suits are brought in behalf of the underground coal miners of these appellants and other coal operators in the United States to recover overtime compensation, alleging the existence of the same facts found by the Court to make traveling time work time, the District Court will necessarily apply this decision in support of the claim that the employers are liable for all the traveling time spent by the coal miners in excess of the maximum hours allowed for the workweek before overtime payment begins. If the employers in these suits seek to defend because the written agreements provide that traveling time shall not be included in the computation and payment of wages they will be confronted with this decision which states: "Industrial custom does not warrant the continuation of abuses that the Act was created

to rectify; *and no contractual agreement that compensation should not be paid for traveling time is valid if in conflict with the Act.*"

If the employers in defense claim that the perils and discomforts in the conditions of employment have always existed and were taken into consideration in the wage scales agreed upon they will be confronted with this decision which holds that it was "the very purpose of the Fair Labor Standards Act to eliminate labor conditions detrimental to the general welfare of the workers," much worse in coal mines than in ore mines.

Under the offered evidence in this case as to coal mines no defense can be suggested which will not be confronted with this "on all-fours" decision. The offered evidence in this case discloses that the coal mine operators will be in a worse plight than the terrible plight in which this decision leaves the appellants because, relying upon the long established custom, their contracts and the opinion of the Administrator, the coal mine operators have continued and are continuing on the "face to face" basis, and, therefore, find themselves, under this decision, confronted with claims for overtime payments since May 1, 1941 (the date of appellants' compliance with the opinion) and with the demand of the Union that they at once comply with the decision of this Court, thereby reducing (if the claims of the Union are correct) the production of coal approximately one-third.

The record in this case shows the consequences and extent of this decision. There are approximately three-

quarters of a million coal mining employees in 29 states, approximately 30,000 of them in the State of Alabama; there are approximately 25,000 underground iron ore employees in 18 states; approximately 6,000 of them in Alabama.

It is respectfully submitted that the fundamental error of this decision lies in its conclusion that the Congressmen and Senators, in voting for the enactment of the Act, intended to abrogate the existing, universal custom in the underground mines of the coal mining and iron ore industries and to declare invalid existing contracts executed in accordance with the prevailing practice and expressly providing that the wages paid the employees for their productive work at the face or usual working places should and did include compensation for the time spent in traveling to and from the face.

THE CONSEQUENCES WHICH WILL RESULT FROM THE COURT'S FORMULA OF IGNORING NATIONAL AND WELL ESTABLISHED GENERAL CONCEPT OF WORK AND SUBSTITUTING THE CONCEPTS OF ADMINISTRATION (CONTRARY TO SUCH NATIONAL CONCEPT) AS APPLIED TO EACH INDIVIDUAL OPERATION ARE WELL ILLUSTRATED BY THE FOLLOWING OCCURRENCES WHICH HAVE HAPPENED SINCE THE SUBMISSION OF THIS CASE AND OF WHICH WE THINK THE COURT SHOULD TAKE JUDICIAL NOTICE:

(a) The War Production Board in aid of increased

production has repeatedly urged the United Mine Workers of America and the coal operators to extend their workweek to 48 hours per week with the understanding that overtime shall be paid, and contracts in various districts have been made and *approved by the Government* for the 48 hour week operation under the *face to face* provisions of the existing contracts.

(b) In the case of *United Steelworkers of America and Columbia Iron Mining Company,* now pending before the War Labor Board, it is the contention of the Union that under the impact of this decision it is a "legal requirement for the industry" that traveling time be paid for as work time, and that the War Labor Board should grant compensation for traveling time, thereby giving to the employees a substantial increase in wages. The Company contends that this traveling time is not a part of the workweek. *This case involves a large strip mining operation in which the men are never underground.*

(c) An appeal has recently been taken by the plaintiff to this Court from a decree of the District Judge (Judge McDuffie) in the case of *Walling, as Administrator v. Gulf States Paper Company,* in which the contention is made by the Administrator that by reason of the judgment here affirmed the time spent by employees of producers of pulpwood in traveling to and from their places of work in the woods constitutes a part of the "workweek," notwithstanding custom and contracts prior to the enactment of the law were to the contrary. The record on this appeal is in preparation.

The Administrator is taking a similar position in other cases involving traveling time.

IX

THE COURT WAS IN ERROR IN THAT THE JUDGMENT OF THE COURT APPLIES WITHOUT ANY QUALIFICATION *TO ALL UNDERGROUND EMPLOYEES.* THE FACTS UPON WHICH THIS CONCLUSION IS REACHED (PAGE 4, OPINION), UNDER THE UNDISPUTED EVIDENCE, ARE NOT IN MANY ASPECTS IN KEEPING WITH THE RECORD; APPLY TO ONLY A FEW OF THE EMPLOYEES AND NEVER APPLY TO A GREAT MANY EMPLOYEES.

The employees were not, as stated, "required to report at the portal of the mine at a specified time." They were only required to report for transportation at such a time as would enable them to reach their working places at the time the work was scheduled to begin and they had the option of taking any trip that they desired to take, provided only they reached their "regular working places" (Page 3, Opinion) at the time scheduled for work.

The Opinion further states, "there to deposit their identification check at the tally office and to board the conveyance provided by the company *for transportation* to a man unloading station inside of the mine." In the case of the Sloss mines, no deposit was made of identification checks, and in the case of the other mines, the evidence is undisputed that the purpose of the deposit

of the check had no relation to the performance of the duties of the employees, but was for use in supplying vacancies in crews and was necessary for safety purposes.

The Opinion further states, "the men rode in skips or ore cars, which were usually coated with grime of the mine, and assumed a crouched position to minimize the hazard of hitting their skulls against the low tunnel ceiling." In the case of the Sloss Company, the cars contained seats and there were no dangers of low tunnel ceiling. In the case of all of the companies, the undisputed evidence shows a de minimis to a surprising degree of any accidents having ever occurred while riding on the skips. The records of accidents over a period of years prove this. The cross-examination of every appellee-witness establishes it. Only two minor accidents over a period of more than ten years was ever proven on any of these skip trips, and these were both due to the carelessness of the person injured and occurred *after* "portal to portal" was, under the compulsion of the opinion, instituted. The Record shows that, in the case of the Tennessee Company, the main slopes and headings are *electrically lighted* and that from the surface to the underground unloading station, a large portion of the way the roof is *concreted!* No ore employee has ever complained of the cars having on them the "grime of the mine," and the "crowded position" is no more "work" than the crowded conditions on the early morning rides in the subways of our large cities.

The undisputed evidence shows that in the Spaulding

mine of the Republic Company (employing 156 underground employees) not a single condition of fact set forth in the Opinion has ever applied. The men walk from the surface to their places of work through a manway with none of the discomforts or hazards referred to (a worker going over a plowed filed to the cotton patch under an August sun is much more uncomfortable).

The Opinion further states, "They were obliged to exercise caution at all times to avoid contact with uninsulated electric wires and other hazards and carried several pounds of equipment to be used in their work during the day."

This, we respectfully submit, is a finding of fact applicable only to a comparatively few of the employees. The record shows these wires in only one mine, and at places where only a few employees travel. It is not applicable at all to most of the service employees, who constitute fifty per cent of the employees on an average of all appellants. Most of the service employees carried no tools or equipment. Many of them were never required to come in contact with any electrical wires. Some of them never go into the headings. The record shows that the dangers of electrical wires were exceptional and really non-existing. *Not a single injury has been or can be traceable to this assumed hazard.*

"The carrying of several pounds of equipment" even among the production crew is limited to one or two members of the crew; most of them never carry any equipment, and those who do carry it, do so for their own convenience.

The Opinion further states, "The men frequently were given instructions as to when and how they should perform their respective duties before the skips left the portal of the mine and at all times during the descent they were subject to Company rules and Company control."

The instructions given at the top of the mine were given only occasionally and only to foremen (many of whom are on a salaried basis and do not even come within the provisions of the Act). We respectfully submit that there cannot be found in the record a *single instance of an instruction given to the production employees as to how they should perform their work when they reached their working places.* On the contrary, the undisputed evidence is that the head miners in the case of the Tennessee Company and the foremen and assistant foremen in the case of Republic and Sloss, who had charge of the men at their places of work, never assumed this control or charge until they had reached the places of work. *They did not even ride down on the same skips with the men or walk with them from the man loading station.*

The statement that, "At all times during the descent they were subject to Company rules and Company control" is likewise true only to a very limited extent. They were subject, for safety purposes, to rules as to conduct and behavior on the skips, *but never as to supervision or rules or control in reference to the details of the work that they were employed to perform.*

APPELLANTS RESPECTFULLY SUBMIT

THAT THE COURT IS IN ERROR IN ITS RULING THAT ALL TIME UNDERGROUND (EXCLUSIVE OF LUNCH PERIOD) IS WORK TIME TO ALL OF APPELLANTS' UNDERGROUND EMPLOYEES.

(a) There isn't a single fact used as a basis for the judgment (or a scintilla of evidence in the Record) which existed or now exists in reference to the 156 underground employees of the Republic Company. *Whatever the final judgment is it should exclude these and like employees from its terms.*

(b) Most of the service employees and many of the productive employees are free from the application of the essential facts which form the basis of the opinion and judgment. *In all fairness the judgment should be modified to exclude these and like employees from its terms or at least give the appellants an opportunity to present the facts in reference to these particular employees, instead of convicting them on facts having no application to them.*

X

THE COURT WAS IN ERROR IN HOLDING (A) THAT *"THE ACTUAL CONTROVERSY"* RELATED ONLY TO THE HOURS OF EMPLOYMENT DURING THE TIME INTERVENING BETWEEN THE EFFECTIVE DATE OF THE ACT, 1938, AND THE DATES THE RESPECTIVE PETITIONS WERE FILED IN APRIL, 1941, (PAGE 2, OPINION) AND IN ADJUDICATING (B) "THAT

APPELLANTS HAVE NOT COMPENSATED SAID EMPLOYEES FOR SOME OF SAID WORKING TIME" AND THAT "REFERENCE OF THE CAUSE TO A MASTER FOR CALCULATION OF AMOUNTS DUE SAID EMPLOYEES WAS PROPER" (PAGE 6, OPINION).

(a) APPELLANTS WERE MORE CONCERNED WITH THE CONSTRUCTION OF THE LAW FOR THE TIME AFTER MAY 1, 1941, THAN THE TIME BEFORE.

The facts in reference to this are undisputed. They are not denied or even referred to in either the judgment and opinion of the District Court or of this Court. These facts are set forth in brief of the Tennessee Coal, Iron and Railroad Company, pages 198 to 214, inclusive, and in the brief of the Sloss Company, pages 111 to 117.

While the claim for reimbursement, some threefold more than the miners expected or contracted to receive, was and is important to appellants, the declaration of the law as to the future is of far greater importance. The justiciable controversy as to the future existed both with appellee-employees and with appellee-intervenor. In fact, as to the intervenor the justiciable controversy related only to the period of time after May 1, 1941.

It cannot under the authorities be asserted and it has not been asserted in this case that "the actual contro-

versy underlying federal jurisdiction'' related only to the claim for reimbursement of wages.[6]

The judgment of this Court as it now stands demonstrates the irreparable injury the appellants would have been put to had they, in opposition to the Administrator's opinion, taken the certain risk of administrative action on the part of the Administrator and of the daily enormous accumulation of claims for reimbursement on the part of the employees.

The undisputed evidence shows that there existed an actual justiciable controversy between the appellants and the underground employees and between appellants and the Administrator,[7] not only as to prior, but more substantially as to future, time; that, under the compulsion of the Administrator and employees announced (and pleaded) intentions, they went at great expense, cost, and loss of production on the ''portal-to-portal'' basis, and that a judicial declaration was required and requested as to whether or not traveling time was necessarily and under any conditions excluded from work time.

This judicial inquiry the court failed to answer and

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[6] Compare Parker v. Brown, 63 St. Ct. 312-313 (January, 1943) where the Court states: "Appellees' allegations of irreparable injury are in general terms. . . . A majority of the Court is also of the opinion that the suit is within the equity jurisdiction of the Court, since the Complainant alleges and the evidence shows threatened irreparable injury to respondent's business and threatened prosecution by reason of his having marketed his crop under the protection of the District Court's decree."

[7] This was the sole controversy with the Administrator, as set up in his answer (Record, Volume I, page 301). As stated by him in evidence: "*I intend to follow the interpretation in question*, unless otherwise directed by the authoritative ruling of the courts *or* unless I shall subsequently decide that my prior interpretation is incorrect." (Record, Volume I, page 384).

confined its answer to the time prior to May 1, 1941. It predicated this answer on the employees "reporting to the portal," there depositing "their identification checks;" there "boarding the conveyances (provided by the company for transportation) coated with grime of the mine" and riding in a "crouched position;" on the danger of "uninsulated wires," and because of instructions and supervision at the portal, etc.

Every one of these basic conditions can be eliminated at much less cost than compliance for all time with the judgment.

(b) The pleadings, the proof, the agreement of parties, and the orders of the trial court all show without controversy that the only issue plead, tried, and submitted was the judicial declaration as to whether or not the Congress intended by the use of the word "workweek" in Section 7 of the Act to exclude or include traveling time. The opinion correctly states that "*upon a pre-trial conference, it was agreed that the primary issue was what constituted the worktime that made up the workweek of the underground iron ore mining employees within the meaning of Section 7 of the Fair Labor Standards Act.*"

This same agreement, approved by the Court under its pre-trial order, in referring to the claims for overtime compensation filed by the underground miners stated that on the consideration of the question as to whether or not the underground employees are entitled to recover against the plaintiff and, if so, how much, "the parties *shall have the right and opportunity of pre-*

senting for the court's consideration their respective claims, rights and defenses" (Record, Volume I, page 305).

The pleadings in this case, under the undisputed evidence, insofar as the claims for overtime compensation are concerned, have never been heard by any court. The consideration of the claims for overtime payment were deferred and reserved by express agreement and by order of the court until the construction of the Act in relation to traveling time was disposed of. These appellants, if this judgment stands, have been deprived of any opportunity to present either to the District Court or to this Court their defenses (apart from the question of whether the travel time was work time) to these claims for overtime compensation (and they have defenses which in good faith, in equity and in law, they wish to have the opportunity of presenting and having determined) either by pleading, evidence, argument, or briefs.

The Court erred in holding that "appellants have not compensated said employees for some of said working time." This proposition is discussed in original briefs in this cause (Tennessee Coal, Iron and Railroad Company, pages 198 to 214; Sloss-Sheffield Brief, pages 111 to 117). The issue of whether any particular man or any group of men or miners involved in these cases worked over the prescribed workweek was not tried, and no evidence was introduced upon that point. There is positively no evidence in this record to show that any individual miner, employee or any of the appellees worked for as much as forty hours in any one workweek.

The question of whether or not it was the intention of the Congress to include traveling time as worktime alone was tried in the District Court.

WHEREFORE, APPELLANTS RESPECTFULLY SUBMIT:

(a) THAT WHETHER OR NOT THE COURT STANDS BY ITS PRESENT OPINION THAT TRAVELING TIME IS WORK UNDER THE FACTS FOUND TO HAVE EXISTED PRIOR TO MAY 1, 1941, IT SHOULD ANSWER THE JUDICIAL INQUIRY AS TO WHETHER OR NOT TRAVELING TIME AFTER MAY 1, 1941 WILL BE WORK IF THE FACTS NOW USED AS A BASIS FOR THE OPINION SHOULD BE ELIMINATED.

(b) THAT THE COURT SHOULD NOT, AS IS DONE BY THE PRESENT JUDGMENT, DEPRIVE APPELLANTS OF THE OPPORTUNITY BY PLEADINGS AND PROOF TO MAKE THEIR DEFENSES TO THE CLAIMS FOR OVERTIME, EVEN IF THE OPINION AND JUDGMENT OF THE COURT THAT TRAVELING TIME IS WORKTIME STANDS.

CONCLUSION

Appellants aver that the pecuniary amount involved in this case is large; that the effect of the judgment is to require appellants to suffer unusual and burdensome penalties; is to give their underground employees compensation greatly in excess of the amounts they contracted to accept, have received and receipted for; is to overturn practices established for many years by agreed customs and embodied in contracts; that it is in conflict with uniform administrative and judicial interpretation of statutes of similar purpose and import; that its effect is national in its scope in that certainly all the underground iron ore, limestone, and coal mines in the United States will have their contracts and present agreed practices set aside; and that the decision is of the greatest concern to millions of people and the general public.

Appellants further assert that the record in this case is of such length and complexity as to have made it a matter of difficulty for any one in a short time to become familiar with the many matters of substance which it embraces; that it will be extremely difficult for appellants to present this petition for a rehearing, in accordance with the provisions of Rule 29 of this Court, unless permission is granted for argument.

WHEREFORE, APPELLANTS RESPECTFULLY PETITION THE COURT, SEPARATELY AND SEVERALLY:

(A) THAT PERMISSION BE GIVEN FOR ARGUMENT OF THIS PETITION BEFORE THE COURT AT SUCH TIME AND UNDER SUCH

[fol. 5021] SUPREME COURT OF THE UNITED STATES

ORDER ALLOWING CERTIORARI—Filed November 15, 1943

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Fifth Circuit is granted.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

[fol. 5020] CLERK'S CERTIFICATE

UNITED STATES OF AMERICA:

UNITED STATES CIRCUIT COURT OF APPEALS, FIFTH CIRCUIT

I, Oakley F. Dodd, Clerk of the United States Circuit Court of Appeals for the Fifth Circuit, do hereby certify that the pages numbered from 4937 to 5019 next preceding this certificate contain full, true and complete copies of all the pleadings, record entries and proceedings including the opinion of the United States Circuit Court of Appeals for the Fifth Circuit, in a certain cause in said Court, numbered 10278, wherein Tennessee Coal, Iron & Railroad Company is appellant, and Muscoda Local No. 123, etc., et al., are appellees; Sloss-Sheffield Steel & Iron Company is appellant, and Sloss Red Ore Local No. 109, etc., et al., are appellees; Republic Steel Corporation is appellant and Raimund Local No. 121, etc., et al., are appellees, as full, true and complete as the originals of the same now remain in my office.

I further certify that the pages of the printed record, Volumes I, II, III, IV, V, VI and VII, numbered from 1 to 4936 are identical with the printed record upon which said cause was heard and decided in the said Circuit Court of Appeals.

In testimony whereof, I hereunto subscribe my name and affix the seal of the said United States Circuit Court of Appeals, at my office in the City of New Orleans, Louisiana, in the Fifth Circuit, this 7th day of August, A. D. 1943.

Oakley F. Dodd, Clerk of the United States Circuit Court of Appeals, Fifth Circuit. (Seal.)

[fol. 5019] UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH DISTRICT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY, Appellant,

versus

MUSCODA LOCAL No. 123, etc., et al., Appellees

SLOSS-SHEFFIELD STEEL & IRON COMPANY, Appellant,

versus

SLOSS RED ORE LOCAL No. 109, etc., et al., Appellees

REPUBLIC STEEL CORPORATION, Appellant,

versus

RAIMUND LOCAL No. 121, etc., et al., Appellees

On Consideration of the Application of the Appellants in the above numbered and entitled cause for a stay of the mandate of this court therein, to enable Appellants to apply for and to obtain a writ of certiorari from the Supreme Court of the United States, It Is Ordered that the issue of the mandate of this court in said cause be and the same is stayed for a period of thirty days; the stay to continue in force until the final disposition of the case by the Supreme Court, provided that within thirty days from the date of this order there shall be filed with the clerk of this court the certificate of the clerk of the Supreme Court that the certiorari petition and record have been filed, and that due proof of service of notice thereof under Paragraph 3 of Rule 38 of the Supreme Court has been given. It is further ordered that the clerk shall issue the mandate upon the filing of a copy of an order of the Supreme Court denying the writ, or upon the expiration of thirty days from the date of this order, unless the above-mentioned certificate shall be filed with the clerk of this court within that time.

Done at New Orleans, La., this 7th day of August, 1943.

(Signed) E. R. Holmes, United States Circuit Judge.

[fol. 5017] MOTION AND ORDER STAYING MANDATE—Filed August 7, 1943

IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY, Appellant,

versus

MUSCODA LOCAL NO. 123, etc., et al., Appellees

SLOSS-SHEFFIELD STEEL & IRON COMPANY, Appellant,

versus

SLOSS RED ORE LOCAL NO. 109, etc., et al., Appellees

REPUBLIC STEEL CORPORATION, Appellant,

versus

RAIMUND LOCAL NO. 121, etc., et al., Appellees

Appeals from the District Court of the United States for the Northern District of Alabama

[fol. 5018] Come the Appellants in the above entitled consolidated cause, and each of them, separately and severally, and state unto the Court that they and each of them will make application to the Supreme Court of the United States for a writ of certiorari to review the decision of this Court,

Wherefore, they and each of them pray the Court to stay the mandate in said cause for thirty days in order for them to make such application to the United States Supreme Court and for such time thereafter as is required to enable the said Supreme Court to consider and pass upon such application.

E. F. All, Borden Burr, Attorneys for Appellants and each of them.

[fol. 5016] ORDER DENYING REHEARING

Extract from the Minutes of July 27th, 1943

TENNESSEE COAL, IRON & RAILROAD COMPANY,

versus

MUSCODA LOCAL No. 123, etc., et al.

No. 10278

SLOSS SHEFFIELD STEEL & IRON COMPANY,

versus

SLOSS RED ORE LOCAL No. 109, etc., et al.

REPUBLIC STEEL CORPORATION,

versus

RAIMUND LOCAL No. 121, etc., et al.

It is ordered by the Court that the petition for rehearing filed in this cause be, and the same is hereby, denied.

"Sibley, Circuit Judge, dissents as to the merits."

statute in which the same inference is not only implicit but must serve as the basis for an absolute rule of law that travel-time underground is work-time.

It being unnecessary for us to decide anything about the propriety of referring the case to a master for an accounting, since the parties have agreed that the court shall determine whether or not the employees are entitled to recover and, if so, how much,[24] the petition for a rehearing is denied.

[fol. 5015] SIBLEY, Circuit Judge, dissents as to the merits.

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[24] By their conduct and agreements the parties have waived questions of misjoinder of causes of action, misjoinder of parties, and the right of trial by jury. Rules 20, 21, 38, and 39 of Federal Rules of Civil Procedure. A common question of law and fact in a multiplicity of suits is not of itself an independent ground of equitable jurisdiction, either in the courts of Alabama or in the federal courts. Matthews v. Rogers, 284 U. S. 521, and authorities cited at page 530. See also Tribette v. Railroad Co., 70 Miss. 182, 12 So. 32, 19 L. R. A. 660, 35 Am. St. Rep. 642, which the Supreme Court of Alabama followed in Southern Steel Co. v. Hopkins, 174 Ala. 465, 57 So. 11, 40 L. R. A. (N. S.) 464, wherein the Alabama court reconsidered its former opinion and adopted the rule announced in the Tribette case upon the question of the jurisdiction of equity to prevent a multiplicity of suits. For a history of the latter case, see Cumberland Telephone & Telegraph Company v. Williamson, 57 So. 559, and Griffith's Chancery Practice, Sec. 439, p. 461.

Syndicate,[22] a case from the Fifth Circuit, the court said that a finding of fact must be upheld "even though conflicting inferences fairly might be drawn by reasonable men from the undisputed facts."[23]

All of these decisions are persuasive of the correctness of our construction of that portion of Rule No. 52, previously quoted, which is that, in actions tried upon the facts without a jury, a finding of fact should not be set aside as clearly erroneous if from the undisputed facts and circumstances two reasonable inferences were fairly deducible and the trial court found in favor of one as being the correct inference. Any other construction of the rule would be equivalent to holding that a reasonable inference fairly drawn from undisputed facts was clearly erroneous, which would be reducing the matter to an absurdity. On the other hand, as will be pointed out in the next paragraph, very serious consequences with reference to state mining statutes might follow a final authoritative ruling that the only reasonable inference deducible is that travel-time is not work-time.

If the contention is sound that the court below should have entered a declaratory judgment for appellants, as [fol. 5014] prayed, but could not correctly enter one against them, as it did, because only one reasonable inference could fairly be drawn from the undisputed facts in evidence (which was that travel-time was not work-time), then the question instantly presents itself as to whether or not the Utah and Arizona statutes are merely arbitrary fiats, violative of the Fourteenth Amendment. The appellants would probably not press their argument to this extent, and yet if it were clearly error for the court below to make the inference it did as to working time, it would be difficult to conceive of facts in existence sufficient to uphold a state

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[22] 110 F. (2) 748, 750.

[23] Cf. Turner v. New York, 168 U. S. 90, 95, 18 S. Ct. 38, 42 L. Ed. 392, wherein it was held that a mere inference of fact from the evidence was not reviewable by the Supreme Court on writ of error, that court being authorized to review only questions of law. This decision is authority for the proposition that such an inference as we are considering is a question of fact, and not a mixed question of law and fact as is being contended by appellants.

drawn therefrom, what is working time is always a question of fact for the court or jury. In view of the diverse legislation above cited, and the general diversity of opinion on the subject, it cannot successfully be argued in this case that only one fair and reasonable inference may be drawn from the facts and circumstances in evidence.

Although from a state court decision,[20] the following is highly persuasive upon the point under discussion:

> "The trior of an issue of fact, whether judge or jury, where the ultimate fact to be proven depends on the surrounding facts and circumstances of the transaction out of which the ultimate fact grew, must by process of reasoning and deduction find the ultimate fact. If, from the undisputed facts and circumstances, two reasonable inferences of fact may be drawn, which inferences are conflicting, and the trior of the issue of fact has found in favor of one as the more reasonable, such finding will not be set aside on appeal, unless against the overwhelming weight of the evidence.
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> "The chancellor in this case heard and saw the witnesses testify, and observed their demeanor on the witness stand. It could have been reasonably inferred from the undisputed evidence that the transfer of the bank deposit was intended as a gift absolute, and, on the other hand, it could have been reasonably inferred that it was a transfer in trust. The chancellor found that the latter was the more reasonable inference. The two inferences, of course, were conflicting. The chancellor settled the conflict. This court cannot substitute its judgment for his."

[fol. 5013] That the federal rule is practically the same, see *South Chicago Coal and Dock Co.* v. *Bassett*,[21] wherein the petitioners urged that whether the decedent was a member of the crew was a question of law, since the facts were undisputed; but the Supreme Court held it to be one of fact, and said that even if the evidence permitted conflicting inferences, there was enough to sustain the Commissioner's ruling. In *Commissioner* v. *Horseshoe Lease*

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[20] Huckaby v. Jenkins, 121 So. 130, 131, 153 Miss. 359, 361.

[21] 309 U. S. 251, 260, 60 S. Ct. 544, 84 L. Ed. 732, 738.

evidence as to what constituted working time of employees in the particular circumstances. The Act of Congress in this respect differs from the legislation of those mining states that limit work-time in underground mines to eight hours per day, and that include in this reckoning all time spent underground.[19]

The pertinent distinction between such state legislation and the Fair Labor Standards Act is that the state legislatures themselves drew the inference of fact as to the working time of miners and enacted a general law on the subject, whereas the Congress failed to provide a general rule or definition in any particular industry. As appellants themselves have pointed out, Section 7 is not limited in its application to any single industry, but is designed to provide a law as to overtime compensation for every sort of work to which the statute is applicable. A detailed code for each industry would have been utterly impracticable. Application to each particular situation of the uniform rule laid down by Congress was wisely left to the courts. Therefore, in actions under the Fair Labor Standards Act, the courts must decide justiciable controversies as to working time upon the law and the facts in [fol. 5012] accordance with the principles governing their jurisdiction and procedure. Unless the facts are undisputed and only one reasonable inference may fairly be

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[19] Arizona Laws of 1912, c. 28, Secs. 2 & 3, p. 59; Arizona Code Ann. (1939), Vol. 4, Secs. 56-115; Utah Laws of 1937, c. 59, amending Rev. Stat. (1933), Secs. 49-3-2. Cf. Nevada Comp. Laws (1929), Vol. 5, Sec. 10237. In the Wyoming statute an express disclaimer was inserted excepting "time consumed in going to and returning from work". Wyo. Rev. Stat. Ann. (1931), Secs. 63-103, 63-107. The Nevada statute limits underground work to eight hours, and provides that this shall "include the time employed, occupied, or consumed from the time of reaching the point of employment or place of work in any underground mine, and in returning to the surface from said point or place of work, and that it is the intent and purpose of this act that the period of time between arriving at the point or place of work, in any underground working, and returning to the surface from such point of work shall not exceed eight (8) hours within any twenty-four hours."

[fol. 5010] In a supplemental brief, one of the appellants says that the effect of our decision, the plain and definite holding of the majority, is that as a matter of law the time consumed in traveling from the portal of the mine to the face and in returning therefrom to the portal "must be included in the working time that makes up the work-week of every ore-mining employee within the meaning of Section 7 of the Fair Labor Standards Act." We did not so hold, and such should not be the effect of our decision.

We have written in vain if our opinion is to be interpreted as providing a rigid definition of working time, or as upholding the portal-to-portal theory as a matter of law, or as denying the principle that in close cases it is well to afford the fullest possible scope to agreements among the individuals who are actually affected. The evidentiary value of such agreements in relation to working time is for the jury or other fact-finding tribunal.[17] We have expounded no rigid definition of working time.

The Act fails to provide one, and we should not do what was deemed unwise to do by legislation. The Congress probably failed to define working time for the same reason that it refrained from attempting to define the regular rate of pay, namely, "because the employment relationships to which the Act would apply were so various and unpredictable".[18]

[fol. 5011] Appellants sought by declaratory judgment to obtain a rigid definition of working time favorable to them. They now chide us for laying down such a definition against them. We did not do either; we merely refused, because not clearly erroneous, to set aside a finding supported by

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[17] Agreements as to working time or the rate of pay are not conclusive if the parties do not act in conformity to the agreements. The court below found that during approximately sixty years of iron-ore mining in the Birmingham district red-ore miners had been paid without regard to the number of hours spent daily at the face or at any specified place or station; and that there had never been any custom under which the miners were paid solely for time actually spent at their particular stations underground.

[18] Walling v. Belo Corporation, 316 U. S. 624, 634, 86 L. Ed. 1716, 1723.

Whether one is working, resting, idling, playing, or preparing to work is as much a matter of fact as whether one is asleep or awake, or is laughing or crying. In *Skidmore v. Swift & Co.*, —— F. (2) ——, this court recently held, in an action for overtime compensation under 29 U. S. C. A. 207, that the burden was on the employees to segregate the actual hours of their employment from the time spent by them in playing, sleeping, bathing, shaving, and dressing. So we say the Act does not define these instances; their peculiar character must be determined by evidence. Two people may be in swimming, an instructor and his pupil; one will be working and the other playing. The working time of every miner is a definite controlling fact that can and must be finally determined in order to fix the amount of wages due him under the federal statute. It is a fact that cannot be found in any statute or decision or law book (except statutes not applicable in this case), but must be determined by the court or jury in any justiciable controversy wherein a real issue arises with respect thereto.[16]

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[16] The court below found the following: The employees were required to report at the beginning of a shift in time to catch the vehicle on one of its trips underground. After reporting at the mouth of the mine the men were daily subject to instructions by the company, and frequently were given their first instructions of the day prior to entering the slope. They were forbidden to enter the mines until their brass checks had been deposited at the tally house. At this point vacancies in working crews were ordered filled by company officials; the head miner or crew foreman began to assemble his crew and to issue orders to its members. When the miners reported at the mouth they were in their working clothes and had their indispensable lamps. The loading of the men into the vehicle in which they were to be transported, as well as the speed and schedule of the vehicle, were under the control and supervision of appellants. They required the men to ride rather than to walk, and required certain ones to ride on particular trips. The miners, being under the disciplinary rules of the company and the supervision of its officials, were subject to conditions peculiar to their occupation from the time they entered the portal until their exit therefrom.

Supreme Court held that members of a train crew under orders, liable to be called at any moment and not at liberty to go away, were none the less on duty when inactive. The court said: "Their duty was to stand and wait." [13]

The law in dispute in the instant case covers less than a page,[14] but the facts are contained in seven volumes of a printed record of nearly five thousand pages. The federal act does not supersede the local law in the several states except to the extent of a conflict between them. It is for this reason that we attach importance to an Alabama decision distinguishing between a finding of fact and a conclusion of law.[15] In that case the court did not discuss the distinction, but what courts do is sometimes more important than what they say; and this is what the Alabama court did: Upon an issue as to the relation between the workman and the employer, it set aside the trial court's conclusion of law as inconsistent with its finding of fact. If the status of a workman when injured on the defendant's premises is a factual condition, the same is true as to the activities of miners. In the case cited we find the Supreme Court of Alabama drawing the distinction between questions of law and fact. The same distinction exists in federal law and procedure, and there is nothing to the contrary in the Fair Labor Standards Act.

[fol. 5009] If the Alabama law governs, then why does not the agreement as to rates of pay and hours of employment prevail? The answer is this: *It does except to the* extent that the agreement conflicts with the paramount provisions of federal law. No agreement as to the hours worked or as to the time of employment is valid if the actual employment is longer than the time stipulated and is in excess of the hours specified in Section 7 of the Act.

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[13] Missouri, K. & T. Ry. Co. v. United States, 231 U. S. 112, 119.

[14] No employer shall employ any of his employees for a workweek longer than 44, 42, or 40 hours, respectively, "unless such employee receives compensation for his employment in excess of the hours above specified at a rate not less than one and one half times the regular rate at which he is employed." Sec. 7(a) of Act of June 25, 1938, c. 676, 57 Stat. 1063, 28 U. S. C. A. 207.

[15] Overton v. Belcher, 168 U. S. 442.

the meaning of the Act. There is no decision of an appellate court directly in point, though there is one from a federal district court in Idaho.[9] Workmen's compensation cases are not very helpful; they prove too much;[10] but one of them is of value not as a compensation case [fol. 5008] but as an authority to support our ruling that what is working time is a question of fact.[11] There is a decision under the Hours of Service Act[12] wherein the

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[9] Sunshine Mining Co. v. Carver, 41 Fed. Supp. 60, wherein the court held that time spent by miners in travelling from portal of mine to their usual place of work and back to portal should be included in hours worked, for which they were entitled to compensation under the Fair Labor Standards Act. See also Sirmon v. Cron & Gracey, 44 Fed. Supp. 29.

[10] In such cases the employee is generally protected while on or about the premises of his employer. In Jett v. Turner, 110 So. 702, the Supreme Court of Alabama said (p. 704):

> "While the employee is being transported by the employer pursuant to the contract of employment, it cannot be questioned they have entered upon the day's work wherein mutual duties of employer and employee are presently being performed. The pay of the employee has begun, not in wages, but in service. * * *"

See also Overton v. Belcher, 168 So. 442; Moss v. Hamilton, 174 So. 622.

Moss Tie Co. v. Tanner, 44 F. (2) 928, was a case from the 5th Circuit under the Longshoremen and Harbor Workers Compensation Act, 33 U. S. C. A. 901 et seq., holding that an employee is generally in the course of employment while going to or from place of work by only practical route.

In Bountiful Brick Co. v. Giles, 276 U. S. 154, under the Workmen's Compensation Act of Utah, the United States Supreme Court said that the employment may begin in point of time before the work is entered upon and, probably as a general rule, may be said to begin "when the employee reaches the entrance of the employer's premises where the work is to be done."

[11] Overton v. Belcher, 168 U. S. 442.

[12] Act of March 4, 1907, c. 2939, 34 Stat. 1415.

The statute simply says that no one shall be employed for a workweek longer than the hours stated, unless the employee receives compensation for the excess hours at a rate not less than one and one-half times the regular rate. That is all the pertinent law involved in this controversy. It is the only statutory provision necessary to be construed. It must be liberally construed.[7] The language is plain; it requires no outside aid in its interpretation; it contains simple words that are in common use; and, under fundamental rules of construction, such words must be given their usual and ordinary meaning.[8] The statute itself defines the word employ to include to suffer or to permit to work. The legislative intent is clear, but it is expressed in general terms and does not extend to particular instances. The myriads of circumstances in which it would be necessary to determine working time in individual cases or classes of cases could not be covered with particularity by statute.

The record in this case presents no substantial question of law except whether or not the finding of the district court as to working time was clearly erroneous. This depends upon whether the inference, which was the basis of the finding, was a reasonable one. As modified by us, we think it was, because the ordinary man might fairly have drawn it [fol. 5007] from the evidence. It was a deduction that the average disinterested person might naturally have made from the facts. The deduction being warranted by the facts, it was not arbitrary and not clearly erroneous. This being true, the rule above quoted is that the finding "shall not be set aside".

These mines are located in Alabama. The contract of employment is being performed there, and the law of that state governs its performance subject to the overriding provision of the federal act that requires payment to employees of additional compensation for employment in excess of the hours specified. This controversy is over the amount of wages that should be paid; it turns upon the number of hours that the miners were employed within

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[7] Bowie v. Gonzalez, 117 F. (2) 11; Carleton Screw Products Co. v. Fleming, 126 F. (2) 537.

[8] Hamilton v. Rathbone, 175 U. S. 414, 421; Mackenzie v. Hare, 239 U. S. 299, 308; Caminetti v. United States, 242 U. S. 470, 485; Louisville & Nashville Railroad Co. v. United States, 282 U. S. 740, 759.

The third point stressed by appellants is that a mixed question of law and fact was submitted to the district court, in answer to which it incorrectly found the facts and errone- [fol. 5005] ously declared the law. On appeal both contentions may be reduced to a single question of law, which is: Was the finding of fact of the court below as to working time clearly erroneous? In reviewing the decision of the trial court we are bound by Rule 52 of the federal rules of civil procedure, which provides that: "Finding of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses."

Even where there is no dispute about the facts, if different reasonable inferences may fairly be drawn from the evidence, an appellate court is forbidden to disturb the findings based on such inferences unless they are clearly erroneous. That this dispute turns upon questions of fact does not withdraw it from judicial cognizance in an action for a declaratory judgment. "The legal consequences flow from the facts and it is the province of the courts to ascertain and find the facts in order to determine the legal consequences. That is every day practice."[6] The parties saw fit to submit the issues of fact to the court, without a jury, but this does not render indistinguishable the issues of law and fact. What constituted the work-week of these employees and how many hours they were suffered or permitted to work are questions of fact.

Upon reviewing the judgment as to the facts, an appellate court looks first to the findings of the court below, and then to the evidence in the record to ascertain whether or not those findings are clearly erroneous. The character of the controversy and the issue to be determined are the same as if this were merely an action by an employee for damages under Section 7 of the Act, viz: How many hours constituted [fol. 5006] his workweek or how long did his employer suffer or permit him to work? In its ultimate aspect this is a dispute over wages, only one element of which is in controversy: the working time, which is a factual quantity of wages just as the regular rate is a factual element of wages. These two factors multiplied together form the product that indicates the compensation.

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[6] Aetna Life Ins. Co. v. Haworth, 300 U. S. 227, 242.

As to the first objection, we have previously pointed out that the declaratory judgment is limited by the facts of the case. It is decisive of the exact controversy that appellants petitioned the court to determine and agreed was the primary issue to be decided. They asserted, and asked the court to say, that no part of the time spent by their underground employees in the bath house, or in going to and from the bath house, or to and from the portal, or to and from the man-loading station, or to and from [fol. 5004]their actual working places, constituted a part of the workweek under Section 7 of the Fair Labor Standards Act. We held, in substance, that no part of the time spent in going to and from the bath house, or in the bath house, or in going to and from the portal, was working time, but that the employment began at the time the employees were required to report and did report at the portal for departure underground, and ended upon their return thereto at the end of the shift less the lunch period. If not required to report at any special time, as contended, then the compensatory employment should begin at the time of departure for the trip underground.

The second objection is that this court did not declare the rights and legal relations of the parties as they existed or may exist subsequent to the date suit was filed. There are no facts in the record to support a finding covering this period, and no finding thereon was made by the district court; but we were told at the hearing, and it is stated in one of the briefs, that after the filing of these suits wages were paid upon a portal-to-portal basis. We cannot enter advisory judgments upon hypothetical facts. The declaratory judgments procedure does not change the essential requisites for the exercise of judicial power. The courts are limited in their jurisdiction to cases of actual controversy of a justiciable nature.[5] We have, therefore, decided the only actual controversy over which we have jurisdiction; and the plenary effect of the judgment as *res judicata* is ample protection for the future.

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[5] Nashville, Chattanooga & St. Louis Ry. v. Wallace, 288 U. S. 249; Ashwander v. Valley Authority, 297 U. S. 288, 325, 56 S. Ct. 466, 473, 80 L. Ed. 688, 699; Aetna Life Ins. Co. v. Haworth, 300 U. S. 227, 57 S. Ct. 461, 81 L. Ed. 617, 108 A. L. R. 1000; Gully, Tax Collector, v. Interstate Nat. Gas Co., 82 F. (2) 145 (C. C. A. 5th).

must decide the issue presented in accordance with the law and the evidence. The procedure is expressly provided for in number 57 of the federal rules of civil procedure, and the technicalities of equity practice do not prevail therein The courts are limited in their jurisdiction to cases of actual controversy of a justiciable nature, thus excluding an advisory decree.[3]

In the case before us both sides joined in the petition for a judicial declaration of the rights and legal relations of the parties, and no objection was made to a consolidation of the cases for trial or to the entry of a single judgment containing such declaration. On the contrary, at a pretrial hearing it was agreed by all of the parties that the primary issue in controversy was what constituted the working time that made up the workweek of employees within the meaning of Section 7 of the Act. The contention of each [fol. 5003] side was stated, and it was agreed that, if the court decided the above issue against appellants, it would then determine whether appellees were entitled to recover and, if so, how much. The rights of all parties were reserved to present their respective claims and defenses upon an accounting. From these and other agreements in the record,[4] it appears that there is only one controverted issue before us at this time, which is what constitutes the working time of these underground ore-mining employees.

The objections to the majority opinion raised on the petition for rehearing may be subdivided, and stated under three heads, as follows:

(1) That the declaration is too narrow to cover all but a few of appellants' employees.

(2) That it is so restricted as to time as to include only the period extending from the date of the Act to the filing of suit.

(3) That this court erroneously declared the law as to when the working time of the employees began and ended.

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[3] Ashwander v. Tennessee Valley Authority, 297 U. S. 288, 325, 56 S. Ct. 466, 473, 80 L. Ed. 688, 699.

[4] R. pp. 278-283.

The parties agreed below that, if the issue as to working time should be decided against appellants, the court should then determine whether or not the employees were entitled to recover and, if so, how much. In the absence of this agreement there was nothing to show that reference to a master for an accounting was necessary after the issue as to working time was finally adjudicated. A declaratory judgment is for the purpose of finally settling an actual controversy, and ordinarily should not be entered if it will not do so. We do not understand that appellants even now are objecting to the reference. They seem to think they have been cut off from presenting defenses to claims against them on the accounting; but in this they are in error except that the declaratory judgment herein as to what constitutes working time will be *res judicata* in any controversy that may arise between the same parties. In order to remove all doubt on this subject, it is ordered that our former opinion and judgment be amended by striking out the following: "that appellants have not compensated said employees for some of said working time."

The apparent confusion in which the appellants find themselves is doubtless caused by their failure to recall the nature of the actions that they themselves originally [fol. 5002] instituted. This appeal involves three separate civil actions that were consolidated for trial in the court below and disposed of by a single judgment. All of these suits were brought under the Federal Declaratory Judgments Act, which provides that in cases of actual controversy the courts of the United States shall have power to declare the rights and other legal relations of any interested party petitioning therefor, and that such declaration shall have the force and effect of a final judgment or decree and be reviewable as such.[1]

This is a procedural statute that provides an additional remedy for use in cases of which the federal courts already have jurisdiction. It should be given a liberal construction and application.[2] A court may not arbitrarily refuse to exercise such jurisdiction in a proper case, but

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[1] Judicial Code, Sec. 274d, as amended; 28 U. S. C. A. 40; Rule 57 of Federal Rules of Civil Procedure.

[2] Miss. Power & Light Co. v. City of Jackson, 116 F. (2) 924, cert. denied, 61 S. Ct. 741.

[fol. 5000] OPINION ON PETITION FOR REHEARING, SIBLEY, CIRCUIT JUDGE, DISSENTS—Filed July 27, 1943

IN THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY, Appellant,

versus

MUSCODA LOCAL No. 123, ETC., et al., Appellees;

SLOSS-SHEFFIELD STEEL & IRON COMPANY, Appellant,

versus

SLOSS RED ORE LOCAL No. 109, ETC., et al., Appellees;

REPUBLIC STEEL CORPORATION, Appellant,

versus

RAIMUND LOCAL No. 121, ETC., et al., Appellees

Appeals from the District Court of the United States for the Northern District of Alabama

ON PETITION FOR REHEARING—July 27, 1943

Before Sibley, Holmes, and McCord, Circuit Judges

HOLMES, Circuit Judge:

In the petition for a rehearing it is stated that the court's opinion in this case is far-reaching in its effect, extending [fol. 5001] to all iron-ore, limestone, and coal-mining employees in the United States, and "is of the greatest concern to millions of people and the general public". In the same petition it is argued that the facts upon which the court's conclusion was based "applied to only a few of the appellants' employees and never applied to a great many employees". Passing over the inconsistency of these statements, it is only necessary to say that if the facts on which our opinion is based apply only to a few of appellants' employees, then the law as we have declared it affects only those few, because the law arises out of the facts: *Ex facto jus oritur.*

2. The petition for rehearing improperly presents matters not in the record.

3. The petition is a perversion of the judicial process.

CRAMPTON HARRIS,
LEE PRESSMAN,
J. Q. SMITH,
Attorneys for Defendants
(Appellees)

I hereby certify that I have mailed copy of the foregoing motion to each Counsel for the Appellants this 13th day of April, 1943.

CRAMPTON HARRIS,
Attorney for Defendants
(Appellees)

[fols. 4998-4999] MOTION OF APPELLEES TO STRIKE PETITION FOR REHEARING—Filed April 14th, 1943

IN

United States Circuit Court of Appeals

FIFTH CIRCUIT

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY,
Appellant

vs.

MUSCODA LOCAL NO. 123, ETC., ET AL
Appellees

SLOSS-SHEFFIELD STEEL & IRON COMPANY,
Appellant

vs.

SLOSS RED ORE LOCAL NO. 109, ETC., ET AL
Appellees

REPUBLIC STEEL CORPORATION,
Appellant

vs.

RAIMUND LOCAL NO. 121, ETC., ET AL
Appellees

MOTION TO STRIKE PETITION FOR REHEARING

Now come all the defendants (Appellees) and move the Court to strike the Petition for Rehearing filed by the Appellants in this cause and for grounds of said motion assign the following separately and severally:

1. The petition for rehearing is a flagrant violation of Rule 29 of this Court.

matters argued at length in appellants' original briefs, in oral argument, and in their reply brief. The only new matter mentioned is not only irrelevant to this case, but is plainly inappropriate in this proceeding.

The "occurrences * * * which have taken place since the submission of the case" (petition, pp. 2, 23-31) clearly do not present a proper basis for rehearing. These so-called "occurrences" on which appellants rely consist of fragmentary newspaper accounts, and other expressions of opinion as to the possible effect of this Court's decision upon pending undetermined administrative proceedings, about which neither appellant, appellees, nor the Court can be adequately informed in a proceeding of this nature. Such expressions of opinion as to the possible effect of a decision upon other cases would not have been relevant or proper evidence at the trial and *a fortiori* are not grounds for a new trial or rehearing. But in any event they are not matters of record in this case nor do they have any bearing on the factual and legal issues involved. There is no occasion for a rehearing or a reconsideration of the Court's decision. Accordingly it is respectfully submitted that the petition for rehearing be denied.

IRVING J. LEVY,
Acting Solicitor,
BESSIE MARGOLIN,
Assistant Solicitor,
United States Department of Labor.

APRIL 1943.

[fols. 4996-4997] MEMORANDUM IN OPPOSITION TO PETITION FOR REHEARING—Filed April 13, 1943

In the United States Circuit Court of Appeals for the Fifth Circuit

No. 10278

TENNESSEE COAL, IRON & RAILROAD COMPANY, APPELLANT

v.

MUSCODA LOCAL NO. 123, ETC., ET AL., APPELLEES

SLOSS-SHEFFIELD STEEL & IRON COMPANY, APPELLANT

v.

SLOSS RED ORE LOCAL NO. 109, ETC., ET AL., APPELLEES

REPUBLIC STEEL CORPORATION, APPELLANT

v.

RAIMUND LOCAL NO. 121, ETC., ET AL., APPELLEES

ON APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF ALABAMA

MEMORANDUM IN OPPOSITION TO APPELLANTS' PETITION FOR REHEARING

The petition for rehearing presents no pertinent legal or factual matters not already thoroughly presented and considered by this Court. The greater part of the petition is merely another reargument of

We hereby certify that we are of counsel for the above named petitioners in the above styled cause; that we are authorized on behalf of petitioners to file this petition and to make this certification; that we are familiar with the matters and things in said petition set forth; that, in our opinion and best judgment, the petition is well founded in point of fact and law; that service of copies hereof has been made upon counsel for adverse parties, and twenty (20) copies hereof filed with the Clerk of this Court.

This 2nd day of April, 1943.

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Attorneys for Petitioners.

LATING TO THE DECLARATION AS TO TRAVELING TIME) AS THEY MAY IN GOOD FAITH PRESENT;

(F) IN ANY EVENT TO SO MODIFY ANY JUDGMENT RENDERED AS TO ELIMINATE THEREFROM THE FOLLOWING PROVISIONS IN THIS JUDGMENT: "THAT APPELLANTS HAVE NOT COMPENSATED SAID EMPLOYEES FOR SOME OF SAID WORKING TIME; AND THAT REFERENCE OF THE CAUSE TO A MASTER FOR CALCULATION OF AMOUNTS DUE SAID EMPLOYEES WAS PROPER;"

(G) AND, IN ANY EVENT, TO DETERMINE BY ITS JUDGMENT THE JUSTICIABLE CONTROVERSY EXISTING BETWEEN APPELLANTS AND APPELLEES AS TO THE CONSTRUCTION OF SECTION 7 OF THE ACT IN RELATION TO THE PERIOD OF TIME SUBSEQUENT TO MAY 1, 1941.

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CONDITIONS AS THE COURT MAY PRESCRIBE;

(B) THAT THIS PETITION FOR REHEARING BE GRANTED;

(C) THAT THE JUDGMENT OF AFFIRMANCE HEREIN BE SET ASIDE AND THE JUDGMENT OF THE DISTRICT COURT BE REVERSED AND A PROPER ONE RENDERED;

(D) THAT A JUDGMENT BE RENDERED HEREIN JUDICIALLY DECLARING, IN SUBSTANCE, THAT IT WAS NOT THE INTENTION OF THE CONGRESS, IN THE ENACTMENT OF SECTION 7 OF THE ACT, AND BY THE USE OF THE LANGUAGE THEREIN CONTAINED, TO INCLUDE TRAVELING TIME OF APPELLANTS' UNDERGROUND EMPLOYEES AS A PART OF THEIR WORKWEEK;

(E) THAT IN ANY EVENT, IF THE COURT CONCLUDES THAT SECTION 7 OF THE ACT SHOULD BE JUDICIALLY CONSTRUED AS INCLUDING ANY PORTION OF THE TRAVELING TIME OF APPELLANTS' UNDERGROUND EMPLOYEES, IN RENDERING SUCH JUDGMENT AND REMANDING THE CASE, IT SHALL PRESERVE TO THE APPELLANTS THEIR RIGHTS TO INTERPOSE IN THE DISTRICT COURT AND HAVE THERE DETERMINED SUCH DEFENSES AS TO THE CLAIMS OF THEIR UNDERGROUND EMPLOYEES FOR OVERTIME PAYMENT FOR TRAVELING TIME (OTHER THAN THOSE RE-